

The **essential** magazine for Amiga enthusiasts

AMIGA SHOPPER

Special Report

**Amigas in shops
by Autumn promise!
And there's more...**



Issue **52** August 1995 **£3.99**

ShopperDisks

Ami-FileSafe, applications,
utilities, demos, samples, clip art, fonts,
modules, 3D objects, programming tools,
tutorial files...

ShopperReviews

- Check out Samsung's new SyncMaster monitor.
- We review the latest incarnation of the world's best multimedia presentation and information display program, Scala MM400.
- Keep your life on track with Digita's Organiser.
- Final Data 2: the update of SoftWood's database.
- Ami-FileSafe is a brand new commercial file system from Fourth Level Developments.
- Flexi-Link: Parnet is finally challenged.
- Plus: 19 new CD-ROMs reviewed.



ShopperTutorials

Photogenics

Create stunning effects by combining images. We show you how easy it is.

Assembler

We explain how to by-pass the Operating System in the penultimate Assembler tutorial.

DICE

Make debugging as painless as possible. (The listings are on the Coverdisks.)

Comms

Make the transition from using an off-line reader to becoming a Fidonet Point.

Scanners

Want to import quality
images? First, read our
definitive Supertest

Silicon chameleon

When is an Amiga not an Amiga? Now your computer can emulate PCs, Macs and more!

Interview: Scala's Amiga plans.

From the makers of

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Is it a bargain the size of a Hippo's Bum? You Betcha!! - Amiga Computing Oct. 1994

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The essential magazine for Amiga enthusiasts

AMIGA SHOPPER

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Printed by: Southernprint Ltd, Poole, Dorset

ISSN 0961-7302 Printed in the UK

News Trade Distribution - UK and worldwide:

Future Publishing ☎ 01225 442244



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ABC

Member of the Audit Bureau of Circulation
Audited circulation July - December 1994: 25,187

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Inside

Issue

Escom and Amiga Technologies GmbH have promised to get Amigas back in the shops by the Autumn.

The future of the Amiga was outlined by Escom in a recent press conference that Amiga Shopper attended. We also asked lots of companies associated with the Amiga to comment on Escom's plans for the Amiga and what they had lined up for the future. Turn to page 14 to discover what Escom have in store for our machine.

We have taken a slightly different tack on the Coverdisks this month - we have an exclusive demo of Fourth Level Developments' new file system for professional users, Ami-FileSafe. But, because that didn't take up much room, we crammed loads more useful programs and utilities on to the disks too. You'll find several new areas which are designated to particular programs: for example, there's an Application Zone, a Utility Zone, a Programming Zone, a Technical Zone and a Creative Zone. All these zones will appear on the disks every month from now on and they will be packed with relevant programs. So you should always find something to interest you.

Back to the issue itself, we asked Larry Hickmott to take a look at the latest in scanners and tell us which are the best value for money. He also mentions other methods for bringing pictures into your Amiga, so you can make the right buying decision for your particular requirements. Turn to the Supertest on page 22

to find out the results of his rigorous tests.

Our interview this month is with Scala in the States. Our US correspondent, R Shamms Mortier asked them what they had in mind for the Amiga. This interview was actually held before the Escom press conference in Frankfurt and the fact that Scala MM300 will now be bundled with every Amiga on sale was not confirmed at the time of writing.

You'll also find reviews of Scala MM400, a three-page feature on emulators for the Amiga and loads more reviews of the latest products, plus two pages chock-a-block with CD-ROMs.

This month we have a special conference with Almathera, producers of Photogenics, the truly excellent image processing program. You'll find the conference on page 66, just before our Photogenics tutorial on page 68.

And don't forget to write in to Talking Shop to tell us what you think of Amiga Shopper and what you would like to see featured in the mag.



Sue Grant

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COVERDISKS If you have a contribution, commercial or otherwise, that you would like to submit for consideration for the Coverdisks, send it to David Taylor.

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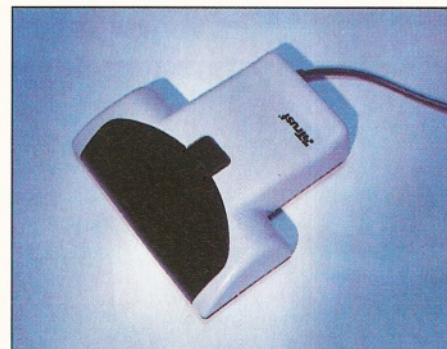
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Annual subscription rate:

The subscription rate for 12 issues of Amiga Shopper including postage is £47.40 (UK), £55.80 (EC), £68.40 (rest of world)

Turn the page for the contents of issue 52



Turn to the Amiga Shopper Supertest on page 22 to find the scanner for you.

AMIGA SHOPPER

The **essential** magazine for Amiga enthusiasts

Shopper**Features**

Special report **14**

Escom held a press conference in Frankfurt on 30th May and Amiga Shopper was there.

Supertest **22**



What is a scanner and what can it do for you? **Larry Hickmott** reviews and rates a selection of flatbed and hand-held scanners.

Emulators **38**



How do you turn your Amiga into a PC, Mac, C64, Atari ST or a Spectrum? **David Taylor** looks at a wide variety of emulators.

Amiga Answers **58**

IRC conference **66**

Almathera, makers of Photogenics, were special guests at a recent Internet Relay Chat conference. **Jason Compton** reports.

Public Domain **84**

Shopper**Reviews**

Scala MM400 **36**

Scala are definitely in the hotseat after the announcement of the bundling of Scala MM300 with future Amigas sold. **Gary Whiteley** checks out the very latest incarnation of this brilliant multimedia program.



Amiga Shopper found out what lies in store for the Amiga at Escom's recent press conference.

Shopper**Reviews**

Organiser **43**



His desk might be untidy, but his life is in order as **David Taylor** gets to grips with Digita's rather fine electronic filofax, Organiser.

SyncMaster 17GLsi **44**

Yes, it's a monitor; yes, it's big; and yes, it's Samsung. **Nick Veitch** checks out the truth in the saying "size isn't everything".

Final Data 2 **46**

Softwood have already released version 2 of their database. **David Taylor** looks at what's new and whether it's worth upgrading.

Ami-FileSafe **46**

Ami-FileSafe is a new commercial filesystem. **David Taylor** looks at the safety this system offers versus its price and passes a verdict.

Flexi-Link **47**

With so many Amiga-owners now having two computers, could this parallel connector bring the two closer? **David Taylor** hooks up.

CD-ROMs **48**

Can you believe it, **David Taylor** reviews a staggering 19 new CD-ROMs this month. Too many to list here - just turn to page 48.

Shopper**Services**

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Shopper**Tutorials**

Photogenics **68**

In part 5 of **Graeme Sandiford's** series of Photogenics tutorials, he shows you how to combine and compose two or more images.

Assembler **72**

Fancy a bit of metal bashing? **Toby Simpson** gives you a lesson in hardware registers and other exciting bits of your Amiga's innards.

DICE **77**

Debugging is a pain. **Toby Simpson** knows this better than anyone and he is the best man to give you a few tips on how to make it easier.

Comms **81**

How do you make the transition from using an off-line reader to becoming a Fidonet Point? **Darren Irvine** looks at Pointing software.

Shopper**Regulars**

The Coverdisks **6**

David Taylor wants you to make the most of the jam-packed Coverdisks this month and tells you how to achieve it.

News **18**

The latest of the greatest on the Amiga scene.

Interview **30**

At Escom's recent press conference it was revealed that Scala MM300 was to be bundled with every Amiga. **R Shamms Mortier** speaks to Scala's John Hillman.

Letters **100**

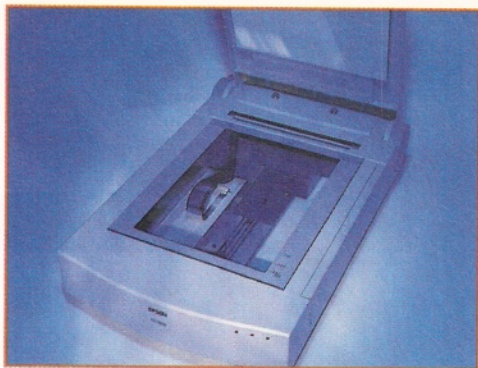
Take a look at the back cover and see if you could have come up with a wittier caption - there's £25 in it if you can.

Next month **106**

Another information-packed issue of Amiga Shopper is out on Tuesday, 25th July.



CD-ROMs provide ideal picture libraries from clipart to 3D textures; you'll find this and more.



Epson's GT-9000 is a superb flatbed scanner.

Supertest _22

The Amiga Shopper Supertest is renowned for being the most comprehensive and informative head-to-head review in the Amiga business. Every month we take a good, long look at what we know are of immediate interest to our readers. In the last few months we have covered programming languages (AS47), modems (AS48), CD-ROMs (AS49), genlocks (AS50) and printers (AS51). This month, our DTP expert, **Larry Hickmott**, tells you which scanner, flatbed or hand-held, is the most suitable for your particular needs.



The Alfascan 800 is a high-res hand-scanner.

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ES.COM Amigas in shops by Autumn promise! And there's more...

Issue 52 August 1995 £3.99

ShopperDisks

Ami-FileSafe, applications, utilities, demos, samples, clip art, fonts, modules, 3D objects, programming tools, tutorial files.

Scanners

Want to import quality images? First, read our definitive Supertest

ShopperReviews

- Check out Samsung's new SyncMaster monitor.
- We review the latest incarnation of the world's best multimedia presentation and information display program, Scala MM400.
- Pro Grab 2.5: the latest in video software.
- Final Data 2: latest version of Digits's database.
- Ami-FileSafe is a new commercial file system from Fourth Level Developments.
- Make life easier with Digits's Organiser.
- Plus, two more pages packed with CD-ROMs.

ShopperTutorials

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Create stunning effects by combining images. We show you how easy it is.

Assembler

We explain how to by-pass the Operating System in the penultimate Assembler tutorial.

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When is an Amiga not an Amiga? Now your computer can emulate PCs, Macs and more!

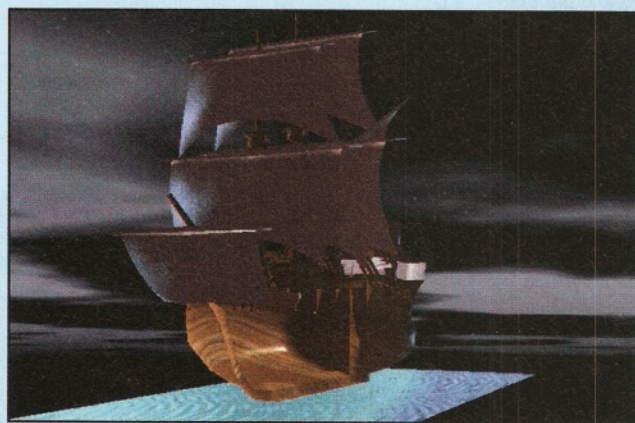
Interview:

Scala's Amiga plans.

From the makers of **AMIGA FORMAT** and **Future Publishing**

9 770961 730070

Shopper**Disks** – turn to page 6 for full instructions



There's so much on this month's disks that there's just no space to tell you about all the programs, utilities, music, clipart, tutorials, CLI commands... Anyway, this is one of the 3D objects that's on there.

An exclusive and fully-working demo of Ami-FileSafe is just the mere beginning for this month's Coverdisks, which are literally stuffed to the gills with 4Mb of utilities, applications, Imagine and LightWave objects, sound samples, programming tools, bitmap fonts, music modules, clipart, CLI commands and so much more!

They are all sorted into suitable areas so you can simply lay your hands on what you want without any trouble whatsoever. Thanks to a new archiver, there's so much packed on the Coverdisks that there just *has* to be something for everyone. Take a look for yourself...





Disks 1 & 2

When do two disks contain 4Mb? When they're the AS Coverdisks of course! **David Taylor** introduces the blinding collection of programs that we've crammed on for you.

This month the Coverdisks have undergone a few changes and we think you're going to be rather pleased with the results, because we certainly are. The archiving process has been altered and you can now boot any disk and install to either floppy or hard drive. To make things even easier, the programs have been divided up into sensible sections to help you find what you're looking for.

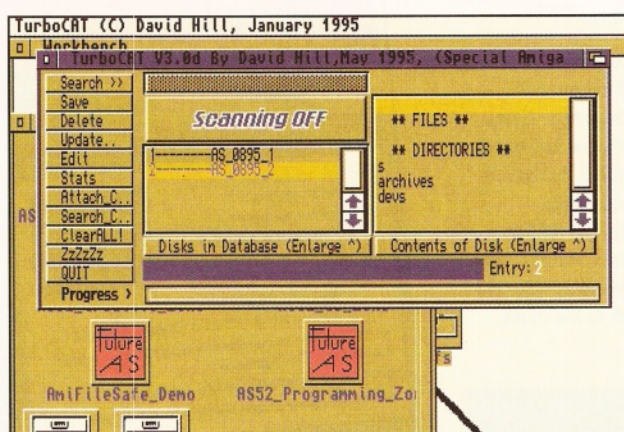
ApplicationZone

TurboCat 3

Everyone tends to have sets of disks lying around and yet very few of us ever manage to label them with more than a cursory indication of what they contain. This program is a powerful and friendly disk cataloguing system. You can select automatic scanning in order to build up your initial database.

All you need to do is load the program and then insert your disks into df0:. TurboCat will scan each disk and record the directories and files stored on each disk. Then simply mark each disk with the appropriate number, starting, believe it or not, with 1.

Once your disk collection has been recorded, you can search through it and edit any records as and when you want. So, should the



TurboCat 3 is a fully automatic disk cataloguing program that comes with another program, TurboView, to allow you to search the contents of your disk collection's database.

contents of your disks change regularly, it's easy to ensure your database is accurate.

In addition to TurboCat, TurboView is also included. This program is the companion program which can be loaded to search the database, either for disks or programs. Once your program is found, the records can be examined.

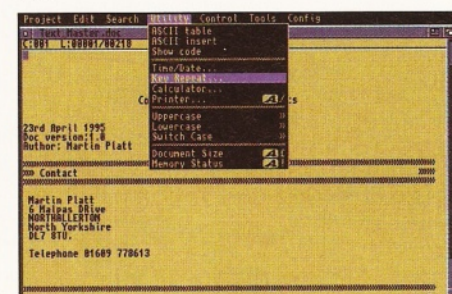
This program can be installed to your hard disk, or run from floppy. If you are running it from floppy, then you may wish to create a single autobooting floppy disk so you don't have to load Workbench every time, especially if you only have one disk drive. To create an autobooting disk, boot a standard copy of Workbench from floppy (this is very important; it must be a standard Workbench) and put the

disk with TurboCat in. Double-click on the Make_Single_Floppy icon and follow the instructions. If you don't need to make a single floppy, you do still need to make an assign, telling the system where the program is. There is a Make_Assign script which you may need to customise, or if you've installed on a hard disk, add an assign to your user-startup.

It's all very easy to use and makes keeping your collection in order a dream. Thanks must go to TurboCat 3's author, David Hill, for supplying AS with this exclusive version. He has also been working on a new version which should be ready when you read this, so if you register, you'll get a full, new version.

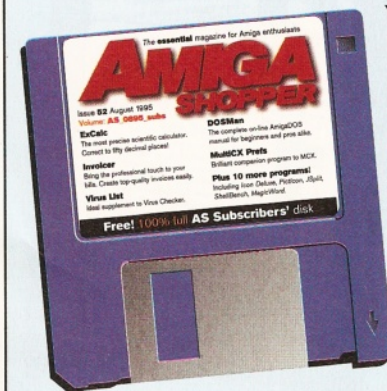
Text Master

There's no denying that the word processors supplied with Workbench are sadly lacking. We've seen many programs launched to fill this gap, but here's a brand new one with some



Text Master is a powerful WP program which has both menu options and keyboard shortcuts.

Subscribers-only disk



You may have thought that we'd already done enough by packing so much on to the Coverdisks, but not being ones to rest on our laurels, we produce a third disk each month which is exclusive to subscribers. So, if you're already a subscriber, you'll know about the 15 more utilities that are packed on there.

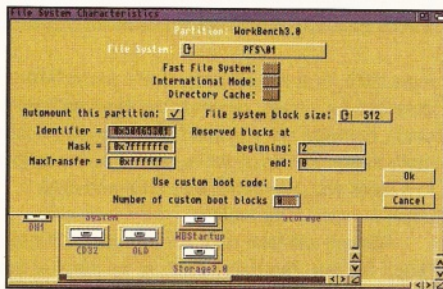
This month's subs disk contains such excellent programs as ExCalc, the most precise calculator for any computer, Invoicer, MultiCX Prefs, the wonderful companion program to the MultiCX commodity on this month's Coverdisks, Icon Deluxe and PictIcon, two powerful icon editing programs, DOSMan, the on-line AmigaDOS manual, Virus List, a useful supplement to Virus Checker and another seven utilities.

If you're not a subscriber and can't bear the thought of missing out on any more of these brilliant disks, then turn to page 56, or phone the subscriptions hot-line on 01225 822511. Remember, these disks are not available any other way, no matter how much begging you do!

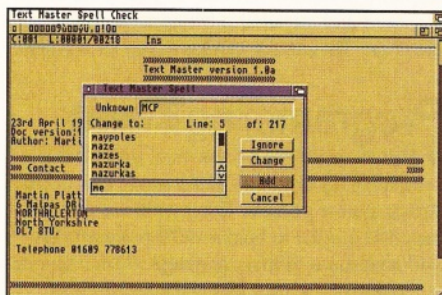
Ami-FileSafe Demo

The Amiga is unusual in that it can support various file systems. Not just PC disks and the PD file systems like Diskspare, it has even had various official file systems, the OFS that the Amiga started out with and the Fast File system that came around with Workbench 2. Directory caching was also introduced.

Although these advances in file systems were welcome, it has been left to third party developers to go further. Ami-FileSafe is a new system that not only allows more data to be fitted on to a drive, but also brings the added security of a system that



Ami-FileSafe can be installed with HDToolbox.



Text Master comes complete with a 36,000 word dictionary, as well as many other features.

unique features. If you use your Amiga seriously, then you'll often need to edit ASCII scripts and although some WPs will do this, they often have commands like Esc which contradict with text you want to input, which scuppers you somewhat. As soon as you try to insert an escape code, you discover that you need to use a different text processor, but who wants to resort to Ed?

Text Master is a fully-featured word processor with everything you'd expect to find. There's the obvious cut, copy and paste, as well as the find options, insert character, switch character cases and document analysis. Also included is a 36,000-word dictionary and a word count facility.

All documents can be loaded and saved as ASCII, which is a welcome relief from the unusual document formats that have been introduced. Using all the functions is simple because the program is menu-driven, but to give you added control, keyboard short-cuts are available.

If all this wasn't enough, Text Master really shows its colours for programmers. Script attributes can be altered and program listings can be compiled. It can also interact with several of the Amiga's commodities, such as selecting the calculator. And the printer runs

Buying Ami-FileSafe

To get hold of a copy of Ami-FileSafe, turn to Amiga Shopper's mail order section on page 34. Or call our mail order hot-line number ☎ 01225 822511.

You can also contact the distributors, Fourth Level Developments, on ☎ 0117 985 4455, or Fax 0117 955 9157. Their address is 31 Ashley Hill, Montpelier, Bristol BS6 5HJA.

can survive a crash when you are writing to it.

It used to be the case that writing to a disk and having a crash meant several hours trying to recover data and salvage your drive, but those days can be over with this new system. Full instructions on to how to use this demo can be found in with the program. It will allow you to create a partition of up to 10Mb on your hard drive for you to play with. You'll notice not only a speed increase, but also better capacity, particularly if you have multiple small files.

For more information about the demo see the docs and for a review of the package, see page 46.

from the preferences, which means that you don't need to configure the program since it will read your settings from Workbench.

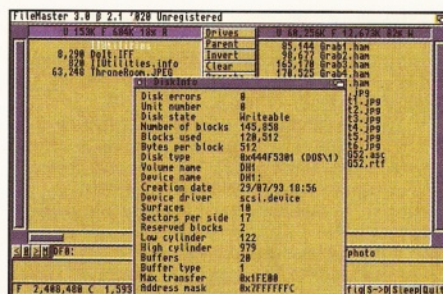
This program requires reqtools.library, which can be copied to your libs: directory, by double-clicking on the Install icon. There is also an icon for creating and booting a single floppy, which you can copy a program on to, to avoid having to load Workbench each time.

File Master 3

If you have a load of programs floating around, especially if you have a hard drive, then Workbench starts to become a slow way of manipulating your files. File management programs are the answer, because it's easy to access files and operate on them.

File Master 3 is a powerful file manipulator that offers all the obvious options, such as copy, move and delete, but also has others, such as makedir, show asc, show hex, show pic (which can even show JPEGs on appropriate computers). It is very advanced and can handle modules and sound samples, with requesters to work from disk or memory to make operation as smooth as possible.

The screen is split into half vertically with



File Master 3 has more than just the copy and delete commands you find in any file manager.

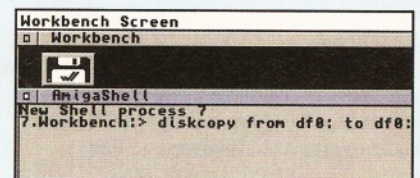
Beginners, look!



Before using either of this month's Coverdisks, please be sure to back them up – just in case. Simply follow the easy instructions below.



- 1 Boot up from your Workbench disk or partition, double-click on your Shell icon – to be found in your system drawer.



- 2 If you only have a one disk drive, type in the following line and then press return.

Diskcopy from DF0: to DF0:

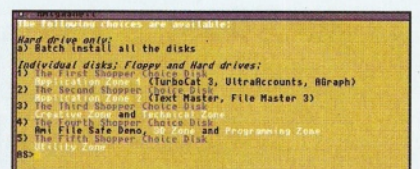
If you have two drives, place the Coverdisk in DF0: and a blank in DF1:, then type in the next line instead.

Diskcopy from DF0: to DF1:

- 3 Follow the on-screen prompts and remember that the Coverdisk is the source disk and the blank is the destination.

- 4 If you used the two-drive method, remember to rename the copy by clicking on its icon and pressing right-Amiga <→>.

- 5 If you have two drives, you can also copy the disk from Workbench by dragging the Coverdisk icon over the destination disk's.

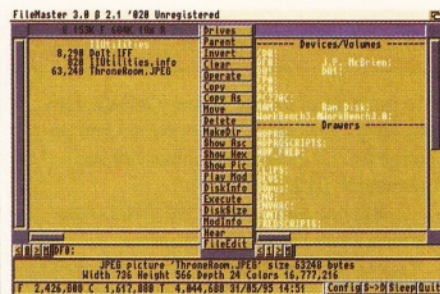


- 6 Then boot any of the disks. However, it is best to boot disk 1 (or the Subs disk if you're a subscriber). This will let you install all the disks to either floppy or hard drive.

Dodgy disk?

If your disk absolutely refuses to work and you are certain it is faulty, please return it, along with an S.A.E., to:

Amiga Shopper Coverdisk
(insert the name of the disk),
Discopy Labs Ltd., PO Box 21,
Daventry, NN11 5BU.



File Master 3 (above) can display many file types including JPEGs like Throne Room (left) from an animation by Jonathan McBrien.

the operators listed in the middle. Each side of this drive or directory is displayed and can be operated on.

Like Text Master, File Master 3 requires the reqtools.library, so either install it or create a self-booting disk. Also, like Text Master, you should register this shareware version.

Ultra Accounts

This program has been designed to be as easy to use as possible, in order to help you take control of your finances. The program allows multiple accounts with the ability to transfer funds between them and simulate the real workings of your account so that you know exactly how much you have at any time.

Creating an account is simple and you can enter your starting balance and then add the maximum and minimum amounts that should be allowed in that account.

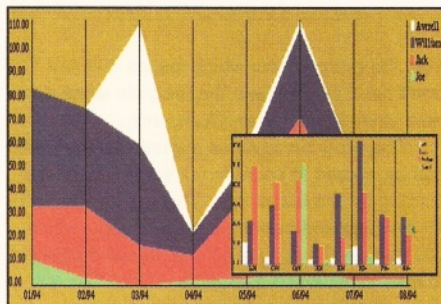
Standing orders and direct debits are supported so that your account is mirrored as closely as possible. In addition, there is a graph

menu which will give you a bar graph charting the highs and lows of your fiscal month.

Registration of this program will bring you more power, and may even be granted at poverty rates, which is quite apt for those of us who need to use this program.

AGraph

When you try to put together a presentation,



AGraph can transform data into different styles of graph and save them as IFF images.

Disk contributions

This month's disks were compiled using files from Aminet and from Walton's Mountain BBS, ☎ 0181 891 5730, and with the help of the authors of the individual programs. The Imagine objects were supplied by the Imagine User Group, 44 Brampton Close, Corringham, Essex, SS17 7NR, ☎ 01375 670036.

If you would like to contribute to a future disk, whether it's a full application, utility, 40K demo, clipart, font, 3D object, or even a module, send it to: David Taylor, Amiga Shopper Coverdisk Contributions, 30 Monmouth Street, Bath, Avon, BA1 2BW. Remember, the smaller it is, the more chance that it will be included.

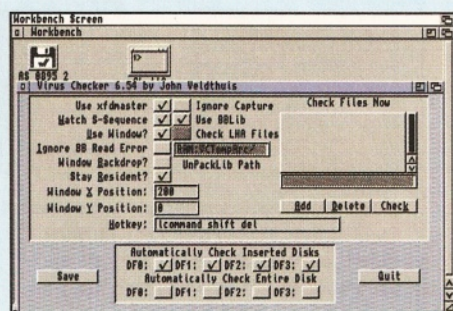
even if it's for a school project, it's much better if data can be visually represented in some form of chart, because we can assimilate the information more easily. However, sitting and drawing charts in a paint program is not only a hit-and-miss affair, it's extremely tedious.

AGraph will take data and transform it into a graph for you. The data needs to be input in the form of an ASCII file, which you could generate with Text Master, for instance. The exact layout is specified in the docs. AGraph will then display it in several formats for you: area, curve, standard and cumulative histograms and as a pie chart. The results can be saved as IFF files.

ProgrammingZone

● AMOS might not be the most powerful programming language, but it is still one of the Amiga's most popular. This month we've included a utility to help AMOS programmers add a bit more to their language. PPAccessory is a utility with a GUI that will load and save powerpacked source code with varying degrees

UtilityZone

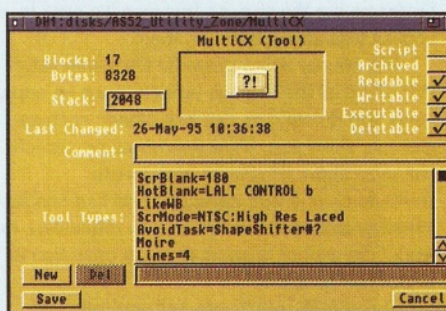


Virus Checker 6.54

This utility should need no introduction. Virus Checker is one of the most popular and well-known Amiga utilities.

This is the latest version and can detect all known viruses. It happily sits in the background and scans every disk as it is inserted to ensure that no virus can infiltrate your system.

The best place to have Virus Checker is of course in your startup-sequence so that it is started every time you boot up. The installation utility does this by default, but note that you may need to edit the path in your user-startup if you put the program in a different place.



MultiCX

MultiCX is a commodity that can perform many different operations, from mouse-acceleration to screen blanking.

This latest version supplied by the author, Martin Berndt, is fully configurable. To change the settings, click once on the icon and then select 'information' from the 'icon' menu on Workbench. The preferences can be set using the tooltypes.

Subscribers, however, can make use of the separate MultiCXPrefs program that is on this month's subs disk. This adds a GUI to the preferences and makes configuration easier.



MegaNote

If you have a photographic memory and never forget anything, then MegaNote won't be of interest. If you're a mere mortal, then this utility is a gem.

Simply double-click on it and you'll have a Post-It! note clone on your screen. You can scribble notes in it and there are as many pages as you'll need. The notes can be autosaved, so all you need to do is jot down your thoughts and they'll never be lost.

It's easy to use and although the docs are in German, being ever helpful we have added a brief translation for you, with the consent of the authors, of course.

of efficiency to help save you space that code takes up.

● So we don't leave anyone out, we have two titbits for Blitz Basic users. There's **Elmorelib**, a library addition that offers loads of additional functions and commands.

● The star place, though, goes to **LES Debugger**, a whole replacement for the default debugger. Simply copy your original debugger to a safe place (never delete a program until you are completely comfortable with its replacement) and then install the new one. There is ample documentation for both of these, so refer to that for more information.

● The tutorial support files can also be found here. These files complement Toby Simpson's on-going DICE C tutorial, which can be found on page 77.

TechnicalZone

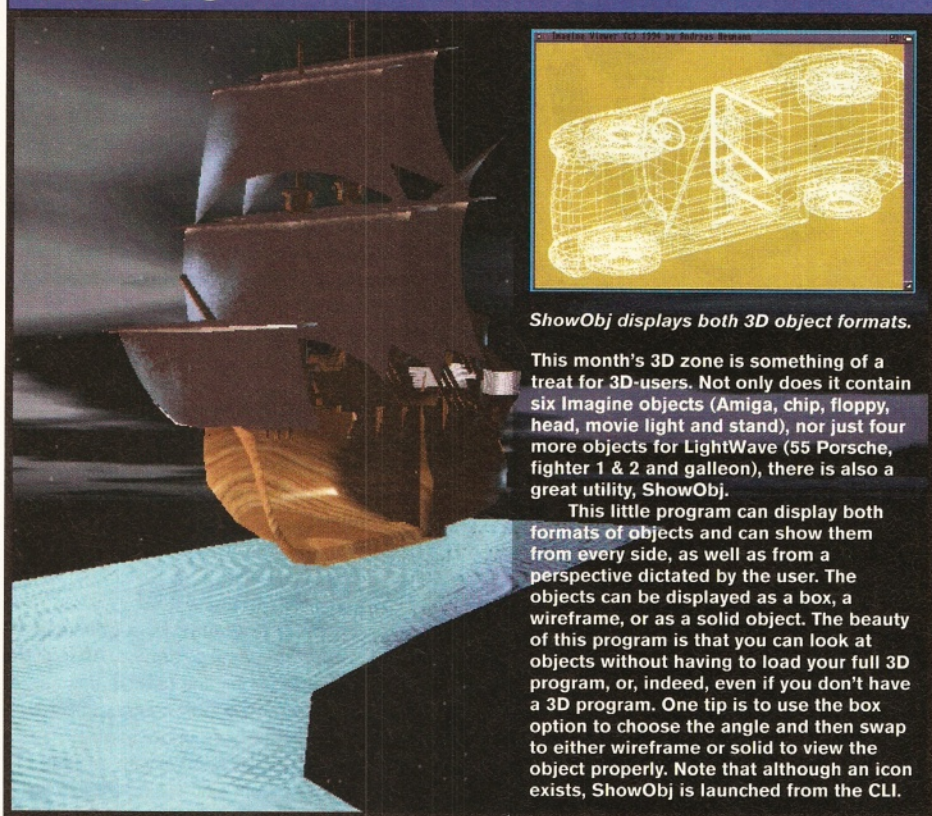
In addition to the rather excellent Workbench utilities that are on this month's disks, this section has some additions for the more technically-minded who like to fiddle around in the Shell and with the OS.

There are six CLI commands included. To use these you must either copy them to your C: directory or add the path to the Amiga's search path.

● **About** is a command that displays information concerning any file you feed it. It reports the name of the file; how many blocks it occupies; what protection bits are set; what class of data it is and what format it is. So you can get detailed information on anything from executables to pictures and text.

● **BootShow** is a command for use in your startup-sequence. It allows you to display a picture of your choice for a specified amount of time to allow your machine to boot with a more interesting screen than a simple AmigaDOS

3DZone



ShowObj displays both 3D object formats.

This month's 3D zone is something of a treat for 3D-users. Not only does it contain six Imagine objects (Amiga, chip, floppy, head, movie light and stand), nor just four more objects for LightWave (55 Porsche, fighter 1 & 2 and galleon), there is also a great utility, ShowObj.

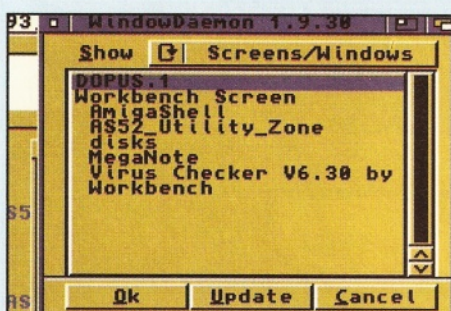
This little program can display both formats of objects and can show them from every side, as well as from a perspective dictated by the user. The objects can be displayed as a box, a wireframe, or as a solid object. The beauty of this program is that you can look at objects without having to load your full 3D program, or, indeed, even if you don't have a 3D program. One tip is to use the box option to choose the angle and then swap to either wireframe or solid to view the object properly. Note that although an icon exists, ShowObj is launched from the CLI.

screen. There are various effects that can be used, including a definable fade. Full instructions are supplied.

● AmigaDOS has a 'run' command that supposedly runs a program without relying on the CLI. **BRUN** is a much-needed update that runs a program truly independently, allowing you to close the CLI window from which the

program is launched without actually quitting the program.

● **CFN** is a personal favourite. It requires a little installation to run, but makes the use of Shell much more pleasant. Add 'CFN' to your C: directory, make CFN run from your startup-sequence and also edit your Shell-startup to use 'notify'. You can now make use of part names in

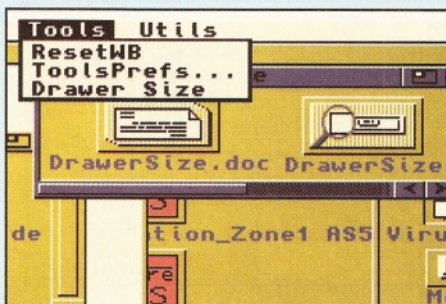


Window Daemon

There are quite a few screen management utilities, but this is definitely the one that I admire most. After you launch it, Window Daemon is activated quite simply by right-clicking in the top right-hand corner of the screen, where the screen cycling gadget is.

A selector pops up, which not only allows you to swap to and activate the screen of your choice, but also to any window on that screen.

So, if you've got several programs opened on that screen, which will mostly mean Workbench, you can jump directly to it.



Drawer Size

This is a very handy utility. After it's run, Drawer Size adds itself to your tools menu on Workbench.

When you single-click on an icon, a drawer, or a disk even, and then select it from the menu, Drawer Size will report the size in bytes along the top line of Workbench.

Although the CLI 'info' command exists, Drawer Size is a useful addition that makes Workbench a much more usable environment.

If you like the program, then placing it in your WBStartup drawer will make it a permanent addition to your system, starting it every time you boot up.



Lazy Bench

LazyBench is yet another commodity that can speed up your use of your computer. Essentially it is designed for people with hard drives who have multiple applications buried deep in sub-directories. Instead of wading through the disk hierarchy every time to find the program, a hotkey will pop a screen up and you can click on the program you want to use. Programs can also be selected using the arrow keys.

A menu is used to create the configuration and you can enter this using a WP, or the program itself will help you create one when it detects that the file hasn't been created.



The Creative Zone contains all sorts of clipart, fonts, samples, modules and even a 40K demo.

a Shell. Simply enter the start of the word and then press tab; CFN will find the first match and complete the word, but if it gets it wrong, you can make it continue until you get the correct match.

If you have directories with long names, the CFN saves a lot of boring typing. If you don't enter any text, but press tab, you can flip through the entire file list until you get the correct one.

● When you delete a file, you may be surprised to know that you haven't actually done that. All that is deleted is the file header, which means that although the blocks themselves are now free for use, all the information is still there, until something is written over the top.

This is great if you want to recover the data, with a program like DiskSalv, but not so great if you have sensitive data that you really *do* want deleted. **Nuke** is the answer, because it doesn't just delete the file, it nukes it! The file is overwritten three times with 0s and 1s before being deleted. Use with care, because once it's been nuked, nothing will get it back. Because of

its nature, Nuke does not support wildcards to ensure you don't wipe data accidentally.

● **Scopy** is a better version of the Amiga's standard copy command, which is slow, has bad buffers and gives no indication of progress. Scopy rectifies all this and has several progress indicators from the standard dot increment type to a full graphical display. Because of clever programming, the indicators don't hinder the progress and you should notice a speed increase.

● In addition to the commands, there is also a Font datatype for Workbench-users to add to their datatype collection. It's easy enough to install as there is an installation script provided. A set of updated FastMath libraries is included for those who have A4000s and Amigas with FPU's. These updated libraries have been optimised for these systems and faster and smaller, yet still 100 per cent compatible. Before you install these libraries, make sure you have a copy of the original libraries.

CreativeZone

As with everything there must be a balance and the AS Coverdisks are no exception. After all the very serious applications and utilities, this section is designed to supply some additional material for the lighter side of computing.

● There is a clipart section with several images that range from electronic symbols for circuit diagrams, to cartoon characters. All the images are in IFF format, so you can load them into any paint or DTP package.

● Speaking of paint and DTP, the Fonts drawer contains 10 bitmap fonts that you can make use of in either type of program, or, indeed, even on Workbench. The fonts range from Outline to Apple to Typewriter and should add a bit of diversity to your work.

Shareware notice!

Remember that a number of the programs on these disks are some form of shareware. AS have compiled the disk with the help of the authors, who have received no fee from AS. So, if you keep and use these programs, you *must* register. Some people only want a postcard, so *please* put in the effort. They put enough effort into creating the program.

● In the Demo drawer you'll find a 40K demo that runs on AGA machines. Not exactly a utility, it is a great display of talent and of what can be achieved in such a small space.

Incidentally, we are inviting readers to send their own efforts in this category in for consideration for future disks. For the address, see the Disk contributions box on page 8.

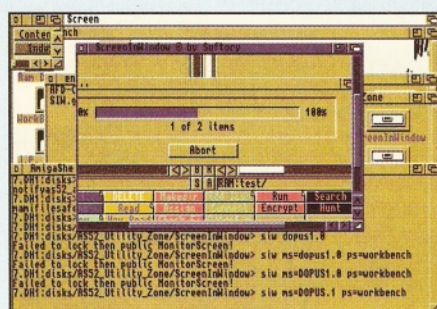
● The Music drawer contains a selection of samples for use in music packages. The samples are both instruments and samples from films and the like. There are also three modules for you to listen to. One is a standard mod, whilst the other two are Chip mods.

All the mods (but not the samples) can be loaded into the MiniPlay utility that can be found in this drawer. This program is a great little module player with a GUI. It requires two libraries, which are included, to be installed, so do use the 'install' icon. When you select a module, note that the pattern is initially set to mod.%, so you may want to delete the pattern to display all the files.

And that is the end for this month. Hopefully, there's something to suit everyone, but we'd like to hear your feedback so that the disks can continue to grow in the way you want them to. Drop us a line at the usual address.

Until next month, then... ■

UtilityZone continued...

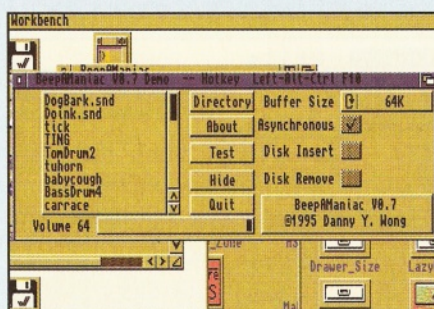


Screen In Window

I have to admit something quite sad here. I always wanted one of those TVs where you could display a picture within a picture. You know, watch one station and display another in the corner of the screen.

Screen In Window is a utility that can do this on your computer. Because of the Amiga's multi-tasking abilities, this is quite a useful thing to be able to do. For instance if you are copying files, or downloading a program in the background, you can keep an eye on its progress whilst you continue working in your WP or paint program.

Plus, of course, it looks rather neat.

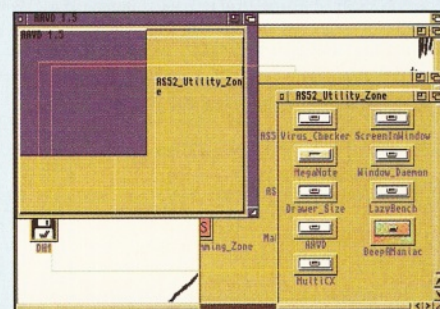


BeepAManiac

When the Amiga wants to alert you - if you make a mistake, or if it finishes a certain task, for example - it flashes the screen and gives you a beep. Now, although this certainly fulfils its function, it's not exactly what you would call exciting.

BeepAManiac can change all this. It patches the DisplayBeep function and allows you to list a set of samples for it to choose from. Now, every time the screen function is used, your Amiga can do anything from sound a horn, to play a Simpson sample to you.

Don't have any samples? Don't despair, take a look in this month's Creative Zone.



AAVD

Some of you may have come across a similar utility on different systems. AAVD is a virtual desktop program. When you launch it, a window will open within which is a representation of the screen itself with all the windows displayed. You can then operate the screens from within this window. If you have a Workbench screen that is much larger than the physical screen, you don't have to scroll around to get to the programs, you can now simply lift them up in AAVD and move them to within visual range.

Apart from the useful aspects of this program, I've got to say, it's great fun to play around with.

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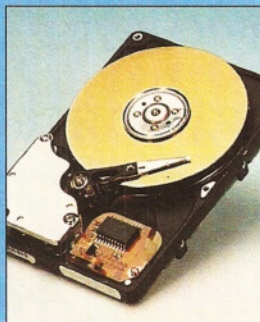
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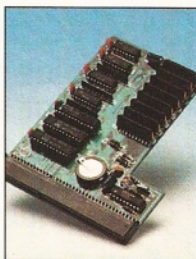
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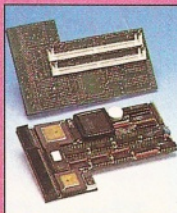
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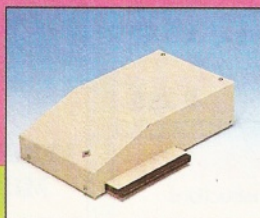
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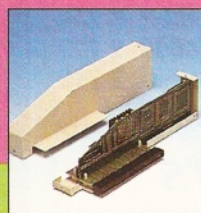


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The Amiga reborn

Amiga Shopper sent along our correspondent to report on the outcome of Escom's recent press conference in Frankfurt. The following is the result...



Amongst the 11 speakers at Escom's press conference in Frankfurt were: Bernard Van Tienen, Dr. Peter Kittel, Manfred Schmitt and Petro Tyschtschenko.

"We see in the Amiga the key to **multimedia** technologies for the future."

Manfred Schmitt, Escom Founder and Chairman of the Executive Board of Escom AG introduced the list of 11 speakers attending the recent press conference held by Escom at the Park Hotel in Wiesenhuttenplatz, Frankfurt on 30th May. The speakers were there to explain Escom's intentions towards the Amiga and its technology.

Over 60 other representatives from the European press, distributors, hardware manufacturers and software publishers also attended the conference. The main thrust of Escom's message was that they see the future of the Amiga as a multimedia platform and that they want to be regarded as a multimedia company.

Basically, Escom's primary aim is to become a leading multimedia provider and they

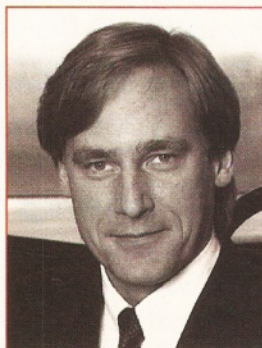
see the Amiga and its technology as the key to their success.

Manfred Schmitt said that since they had bought Commodore International, Escom had been absolutely flooded with enquiries and messages of support from Amiga users worldwide. Those users will be pleased to hear that he also said: "We see in the Amiga the key to multimedia technologies for the future". And he praised the Amiga's Operating System saying that it had a "still unmatched multitasking ability".

Petro Tyschtschenko, the General Manager of Amiga Technologies GmbH made it very clear that Escom considered the Amiga to be a superior technology and that they were committed to resume production of the Amiga and to continue development of hardware and software. "Commodore patents and licences are the key to multimedia technology".

We all know that the Amiga has always been ahead of its time as a multimedia machine, even before the term multimedia was coined – and Escom are looking to use its technology in as many ways as possible, including high-end graphic workstations, home multimedia machines, games machines, within third-party multimedia applications and as the basis of a set-top box for interactive TV.

The Amiga represents an amazing price and quality ratio with an unmatched ability for multitasking. As Manfred Schmitt put it, "The Amiga is still a very efficient and inexpensive computer". It has a very low consumption of RAM and "the Amiga Operating System needs eight times less memory than Windows, and it multitasks better than Windows". The quality of Amiga video is outstanding – "superior to the PC" – and it can also be played straight into TV



Manfred Schmitt is the Founder of Escom and Chairman of the Executive Board. He holds a stake of 51 per cent of all Escom's shares.



Bernard Van Tienen is a member of Escom's Executive Board. He is responsible for worldwide purchasing.

because it is already PAL and NTSC compatible. All of which make the Amiga the ideal multimedia machine.

Escom also made it clear that the rumour of a finished new Amiga is completely untrue. However, production of an A4000T multimedia machine will start in September 1995 and, apparently, 20,000-30,000 of these A4000Ts are already sold out in preorders.

Production of A1200s will begin in October 1995 and Escom expect to shift enough units of the A1200 and CD32 to meet the Christmas demand. However, they were not prepared to commit themselves to the exact amounts of machines that will be available at that time, or even how much they will cost.

The names Commodore and Amiga are now to be completely separate. Commodore is being associated with Pentium multimedia PCs and Amiga Technologies GmbH is the new international Amiga company which is 100 per cent owned by Escom. It will have two main divisions, one based in the US and the other in Germany.

One of the reasons given for this separation of Commodore and

Amiga is that, apparently, 92 per cent of all PC owners in Europe recognise the Commodore name and the excellent quality that it stands for. There are a couple of logos in consideration to be associated with Amigas, but Escom haven't decided on the one to use yet. The first Commodore multimedia PC Pentium machines will go into production this year and there will be around 50,000 to 60,000 units available at first.

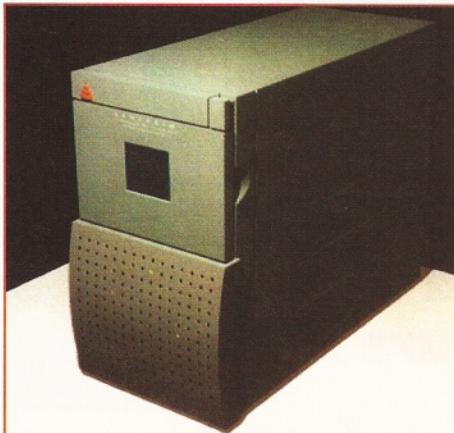
Amiga Technologies' headquarters will be based at Bensheim in Germany. Escom are determined that the costs of their distribution network will be tightly controlled – they are not looking for offices in each and every territory. A US distributor hasn't been appointed yet, but

Petro Tyschtschenko is the General Manager of the newly-formed company, Amiga Technologies.



talks on the subject are under way. There are around 10,000 A4000s ready for sale in the States. The Tianjin Family-Used Multimedia Co Ltd in China is set to manufacture the lower range of Amigas and also the Commodore 64.

The C64 is a success in China already, but not with a licence, Escom's partner in China has 80 per cent of the games market over there, but they will be concentrating on the CD32. The



The new light green design of the A4000T. The logo has yet to be finalised.

"The Amiga is still a very efficient and inexpensive computer."

C64 was compared to the Volkswagen Beetle as far as popularity and market presence went. Escom also want to redesign the CD32 to produce a model that will be stronger competition for the likes of Sony and their PlayStation.

Amiga Technologies will produce a multimedia range of machines with Motorola processors and the Commodore machines will be the Intel-based Personal Computers.

Escom said they have a good relationship with Motorola and that because Motorola only deal with IBM and Apple at the moment, they are looking for a company that can move much more quickly to get their CPU technology into the market.

Escom have also been in close negotiation with Scala and they have announced that the multimedia presentation and information display program, Scala MM300, will be bundled with every Amiga sold from now on.

There are also engineers in Philadelphia working on RISC-based Amigas with Scala and Motorola working alongside them. (Have a look at our interview with Scala on page 30 and the review of Scala MM400 on page 36.)

Escom are also keen to be flexible with the licensing of their technology and they are happy to grant licences to companies who want to integrate Amiga technology in to their own products. One of the projects that Escom are

Jeff Frank is the Engineering Director of Amiga Technologies. He used to work for Commodore as their Director of Development.



Industry talk

We asked a whole load of companies involved with the Amiga if they were going to continue to support the machine in the light of Escom's announcements. We also asked them how they saw their company and Amiga Technologies working together and if they had any new products or upgrades in the pipeline.

Here is what they said – in no particular order.

Yes, we will be delighted to support any new Amigas, as well as to continue support for the older models.

Upgrading the 1200 to an 030-based machine is a tremendous idea, providing that the machine represents value-for-money. Many 1200 users are now beginning to purchase our Apollo 030-based accelerators and the migration to these higher spec processors has already started.

Any new machines need to be backward compatible with previous incarnations and a beefier power supply would be most welcome.

Simon Cobb,
Siren Software

Almathera is confident that Amiga Technologies has the will and the means to bring back the Amiga to the mass-market. With their promised liberal and open licensing, Amiga Technologies will be able to re-kindle the confidence of hardware and software developers. We will support Amiga Technologies with our knowledge and our commitment to the Amiga and are happy to be part of the Amiga revival.

J Bruno Sajno,
Almathera

Commodore failed for two reasons: lack of foresight to the future of computing and a total disdain for the vendors supporting the Amiga. The Amiga technology was at one time far ahead of the PC and the MAC for its multimedia abilities, however, at present, the Amiga is far behind what the PC can do. If Escom is going to resurrect the Amiga it will have to do so with great software – too many vendors are gone now; it will take a major effort on the part of Escom to revitalise this end of the Amiga.

Impulse will continue to support the Amiga as long as we have users to support. We have many new things planned for both the Amiga and the PC. In short, until we hear from Escom, we move forward without their direction.

Michael C. Halvorson,
Impulse

We at White Knight Technology are very encouraged by the recent news from Escom. It is pleasing to see that they have concentrated initially on producing the high-end, professional machines and that they are keen to promote the multimedia facilities of the Amiga.

We hope to work closely with Escom in the future to promote the Amiga platform in the areas of digital video and non-linear editing. Having weathered the Commodore liquidation storm, we plan to continue supporting professional Amiga users around the world with more confidence than ever.

Ian Greenaway,
White Knight Technology

The initial plans of Escom seem extremely promising and I was very pleased to see a higher specification A1300 machine as this could be a great low-cost platform to develop high-end peripherals for. Many of our products have been aimed at the big-box Amigas, due to either processor requirements or expansion limitations, but this could change with the A1300.

We will continue to support the Amiga 100 per cent and I would very much like to see A1200/A1300 versions of Emplant and a 24-bit capacity offered in the future.

New products? Yes, we have several in the pipeline, but it's a little too early to say at the moment.

Paul LeSurr,
Blittersoft

We are delighted about the announcements Escom have made regarding Amiga Technologies GmbH. At last we know that the Amiga has the future it so richly deserves.

We shall definitely continue to support the Amiga, both in our retail and production divisions. Premier Division was formed as a "one-stop" solution for multimedia and desktop/interactive television, based primarily around the Amiga, and we are delighted that Amiga Technologies' main thrust will be in these areas. We look forward to working closely with the new company.

Andrew Gould and Andrew Bishop,
Premier Vision

We shall still be supporting the Amiga range of computers. We have already brought out new economical 24-bit colour scanners for the Amiga and several other products, including hard drives, modems, etc.

We also have several other new products and special offers in the pipeline that will be on offer once Escom have brought out the new range of Amiga computers.

We are looking forward to seeing the new machines that start with the 030 A1300 and the 060 A4000 and we hope that Escom do really well in the future.

Darren Wright,
Gasteiner



Dr. Peter Kittel talks about the way forward for development of Amiga technology.

"Escom are looking to a great future for the Amiga architecture."

interested in for the American market is the production of set-top boxes – they have already signed a licensing agreement with VisCorp to this effect.

Tyschtschenko isn't the only employee of Amiga Technologies who used to work for Commodore, Jeff Frank was the Director of Engineering for Commodore and he will be giving Amiga Technologies technical assistance with engineering and manufacturing of Amiga-related products. In fact, the A4000T will be like a new product because Commodore only ever built 1,000 units.

Both the A1200 and A4000 will feature the AmigaDOS 3.1 Operating System and one of the first projects is to be a 68060 processor upgrade for the A4000. Escom are also planning an A1300 with an 030 processor and integrated CD, but this A1200/A1300 new design won't come into effect until January 1996.

The AAA Chipset is a long way into development and Escom want to pursue it, but that's all they would reveal on the subject and they have no plans to put an Amiga card into a PC at present.

Escom are considering two alternatives to further developments for the Amiga: a Power PC equivalent and the RISC-based machine. The Amiga's Operating System will also be



Don Gilbreath of VisCorp, who have already been granted a licence to use Amiga technology in their interactive set-tops.



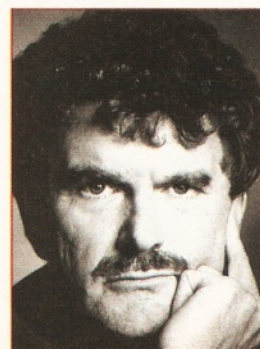
The Commodore logo on the new multimedia Pentium PC, available in August this year.

adapted to the new hardware platform. But Escom are keen that the new machines will be still recognised as Amigas – they are "looking to a great future for the Amiga architecture", according to Amiga Technologies' Head of Engineering, Dr. Peter Kittel.

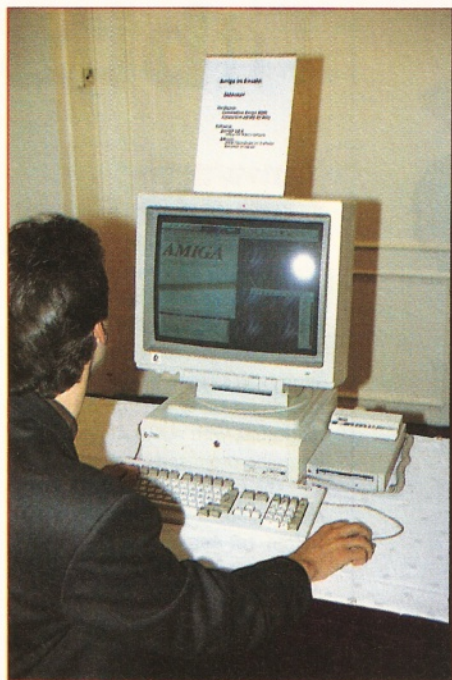
In his closing speech, Manfred Schmitt said "We want the Amiga to succeed again as it did in the past; we want it to be recognised as an important player in the personal computer industry and we want it to be an interesting alternative to other systems". Fine words indeed, and we should all be encouraged that the Amiga will soon rise again from the ashes of liquidation.

As for David Pleasance, Colin Proudfoot and team no mention was made at the conference. However, as MicroScope magazine (of 24th May 1995) reported, "Commodore UK's future was in the balance last week after Escom announced it had no need for the operation and was no longer in negotiations to buy it".

This report, written by one Leslie Yazel went on to claim that Bernard Van Tienen had "rebutted Pleasance's prediction that Escom would take over Commodore UK". Escom's only comment on Commodore UK was that they were "out of the picture". ■



Prof. Hartmut Esslinger is the President of Frogdesign who are a corporate strategic design consultancy being used by Escom and Amiga Technologies.



An A4000 with Cyberstorm 68040 40MHz running AmiTCP version 4.2 and AMosaic.

"We [Escom] want the Amiga to **succeed** again as it did in the past."



The Commodore Pentium PCs will be fully loaded P75 and P100 multimedia PCs.

The three amigos

The three Amigas that Amiga Technologies and Escom are concentrating on are the A1200, A4000T and the CD³². All three are due for a redesign and the new-style machines will be in production at the beginning of 1996.

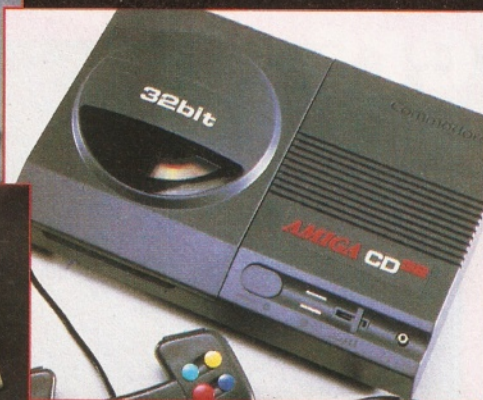
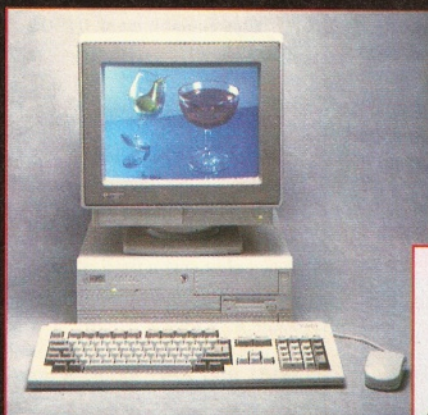
The release of the A4000T will be just like a new product launch because Commodore only ever made about 1,000 of A4000Ts themselves. They will now be enhanced with a 68060 upgrade and will include AmigaDOS 3.1. The A4000T multimedia machine will be in production in September. As we said earlier, 20,000 to 30,000 A4000Ts have already been sold in preorders.

Production of the low-end A1200s and CD³²s will begin again in October in time for the Christmas sales, but it won't be until the beginning of 1996 that we see a redesigned A1200 and CD³². Then, the A1200 will be upgraded from an EC020 to an 030 processor and will be renamed the A1300. It will also have built-in support for Fast RAM.

Escom feel that the Amiga is a creative machine and must therefore appeal to creative people and so the machines should look much more stylish than before. They also feel that because they have to fit on to a table, the design should reflect this and it to be designed to be a proper tabletop machine - all reasons behind the mini tower redesign pictured on page 15.

Escom are also keen to have a new logo to put on all of their new Amigas - there are a couple of designs under consideration at the moment, one of which is a very Swedish/Ikea-like-A-with-three-bars affair.

We should have a picture of the new logo in time for the next issue.



Digita have enjoyed an extremely close and productive relationship with Commodore since 1988 and the launch of the Amiga A500. I see no reason why this should change with its new owner, Amiga Technologies GmbH.

Digita is continuing its commitment as Europe's most successful developer of Amiga serious software. With products like Digita Wordworth, the world's most popular Amiga word processor (Amiga Shopper Reader's Awards choice), our new award-winning database, Digita Datastore and, only just launched, the Digita Organiser (featured on the Amiga Shopper Coverdisk, AS51).

Digita has a number of other exciting products under development, including the new Digita Wordworth 4.

Jeremy Rihl,
Digita

We are pleased both by Escom's acquisition of the Amiga and the plans they've announced through their new company, Amiga Technologies. Even though Escom have traditionally sold mainly PC-compatibles direct to end-users, only through their own stores, the facts that they are Europe-based, obviously profitable and already familiar with the logistics of manufacturing and getting their products to the market, means the Amiga should be in good hands. Many of their existing staff are ex-Commodore, so they are ideally placed to make the right things happen quickly.

Since the demise of Commodore last year, we've actually put more effort behind three key product areas within our business, in anticipation of today's situation where Amigas will soon be back on sale again. We already have a good dialogue with Amiga Technologies which is allowing us to ensure our future plans are on target.

In the past year, we've strengthened our Blizzard and Cyberstorm accelerators which, it seems, are now the market leaders. This has been emphasised by the recent announcement that the new 68060 A4000s will have their CPUs running courtesy of Cyberstorm technology.

There's still a lot of growth in the area of video connectivity for the Amiga - we've just announced an enhanced version of our ProGrab 24RT real-time frame grabber and digitiser. This now includes an S-VHS Interface as standard - with no increase in price. Also, we'll soon have a new genlock to add to our video range, with a price/performance that will cause a stir.

The other company with which I am involved, SoftWood, has been busy both developing new releases and enhancing existing products. This last year we've launched Final Data which is already at release 2, and the launch of our all-new spreadsheet, Final Calc is imminent.

Giles Harwood,
Gordon Harwood Computers
and SoftWood

News

This month in Amiga Shopper's news pages: Premier Vision's brand-new rendering engines; GoldenGate offer; ACD-300 price drop; new magazines from Future; animated colour fonts; new version of LZX; and much more.

Premier stuff

Premier Vision have a whole host of new products and older products at reduced prices lined up for you.

Firstly, there is their brand-new rendering engines – the Warhog series. These are DEC Alpha-based machines and Premier reckon that they can run up to 30 times faster than a Pentium 90.

Impressive stuff indeed. We'll be taking a look at the Warhog in our next issue. Premier are at present using a Warhog to test a beta version of LightWave 4 – which will also be appearing within the pages of Amiga Shopper shortly.

Premier Vision have also released a video called Pro Flying Logo Techniques – professional LightWave artist, Tony Stutterham explains his techniques for creating high-end 3D logo animations. The video will set you back £179.

Still on the subject of LightWave, you can now

create excellent hair effects with Fibre Factory from Premier Vision. Hair-raising indeed for only £39.95.

Next, there's Version 2 of Anim Workshop. This new version only costs £69.95 and enables you to create, play and edit your animations – you can even add sound to your Amiga animations with Anim Workshop 2.

Not content to stop there, Premier Vision also offer Humanoids which contains realistic models of four human beings – a man, a woman, a strong man and a child, all of which are easy to manipulate to create particular poses or motion. Humanoids costs £170 plus VAT.

And to round off, Premier Vision are selling Pixel 3D Pro Version 2 at a reduced price of only £129.

To contact Premier Vision about any of their products, just call ☎ 0171 721 7050.

Shop till you drop?

If you thought it was safe to go shopping over the Internet, beware. According to a recent report in The Times, banks are advising clients that credit card transactions are not a good idea and that they shouldn't

use their personal identification numbers for buying goods over the Net.

Around a staggering three million companies advertise their products for sale on the Internet, so

there's a huge temptation to shop the easy way and just tap in your details and numbers.

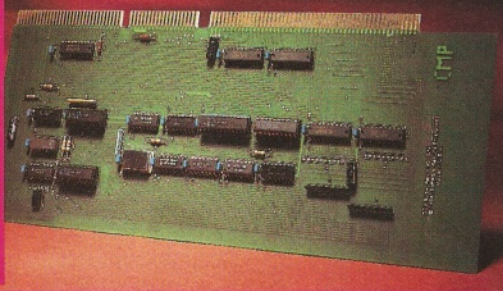
Apparently, Microsoft and Visa International have agreed to co-operate in dealing with this problem, so wait till they give us the go-ahead before you sign your hard-earned cash away.

Golden offers

If you read our review of the GoldenGate (GG2) Bridgeboard in issue 50 (90 per cent and a Star buy), you may be interested to know that Eyetech have an introductory offer to the board, which is a bundle consisting of: an Ethernet card, a multi I/O card (2x serial, 1x parallel, 2x IDE), a 4800/9600 data/fax modem and the GG2 board (plus all drivers). The bundle will set you back a very reasonable £200.

Eyetech also sell Amiga 1200 hard disk kits, which include all cables, a nylon insulation sheet, a step-by-step guide, earthing straps and an antistatic kit for the drive fitter. A 428Mb kit costs £179 whilst the 545Mb kit goes for £199.

Eyetech can be contacted on ☎ 01642 713 185.



Titbits

Tamworth Computer Show

If you happen to be in Staffordshire on 2nd September, why not drop in to the Tamworth Computer Show at the Assembly Rooms, Corporation Street, Tamworth? There will be 50 stands covering a range of platforms, with some Amiga bargains promised.

The tickets only cost £1.50 on the door. If you order them before 1st August you can get them even cheaper – send your order to: Ticket Allocation, 8 Healey, Lakeside, Tamworth, Staffs B77 2RF.

And it's all in a good cause too, because the profits from the ticket sale will be donated to cancer research.

Aural Illusion 2

Seasoft have announced the release of Aural Illusion 2, costing only £20. This professional sample editor offers 55 manipulations including eight filters.

The editing functions range from loudness to copy into. It supports various file formats such as IFF, Wav, Voc and Raw. All the processing is done in 32-bit format and stored in 16-bit format.

The only system requirements are Workbench 2.04 or above and 2Mb RAM.

Call Seasoft on ☎ 01903 850378.

More mice for your money

Golden Image have announced the launch of Mega Mouse Plus. This new mouse features an eight foot cable and a third active mouse button and will set you back £15.95.

Contact Golden Image on ☎ 0181 900 9291 for order details.

Link in the chain

If you own a Cambridge Z88 portable computer and want to link it up to your Amiga, then get in touch with Sector Software because they have a software and cable linking system that sends ASCII 0.255 data from the Z88 to your Amiga and vice versa. The package costs £25.

Call Sector Software on ☎ 01772 454328 for further details.

Price reduction

Videoworld have slashed the cost of their Nexus Pro Reference Library CD-ROM from £49.99 to £19.99. Amiga Shopper reviewed this CD in issue 47 where we gave it a hefty 90 per cent and a Star buy award.

If you're an Amiga desktop video enthusiast and are after a collection of backgrounds, fonts and sounds, then contact Videoworld on ☎ 0141 641 1142.

Prehistoric bargain

Another CD-ROM to be reduced significantly in price is Insight: Dinosaurs from Optonica.

This CD was produced in association with the Natural History Museum and you can now pick it up for only £19.99, that's a reduction of £20!

For further information, call Optonica on ☎ 01455 558282.

Moving home

Foundation Imaging have moved to a new address. You can now contact them at 27525 Newhall Ranch Road, Suite #9, Valencia, CA 91355, USA.

Their phone number is now ☎ 001 805 257 0292.

The Room Upstairs

We interviewed the people who set up the graphics company The Room Upstairs on page 32 of last month's issue (issue 51), but forgot to include a contact number for them.

So, if you are interested in their work and you want to know more, then you can reach them on (phone/fax) ☎ 01923 445467.

Technosound Turbo 2 Pro

Technosound Turbo 2 has been updated to a new professional version. The layout has been restyled and the software has been enhanced.

The software will run with either 8-bit digitisers (supplied), or with an advanced 12-bit sampler.

Astute observers will have noticed Technosound Turbo 2 on the cover of our sister magazine, Amiga Format. AF have also got an upgrade offer for readers to purchase the 8-bit version for only £29.99 and the 12-bit for £59.99.

New Dimensions, the distributors, can be contacted directly on ☎ 01291 690933.

CD-ROM or optical drive?

The problem with CD-ROM drives has always been their read-only capabilities. Yes, it's great to get 650Mb on one disk, but we always want more; we want to be able to write that much as well.

The new Panasonic drive from Hi-Q could be the answer. Not only is it a quad speed CD-ROM drive, but you can drop an optical disk into the same tray and write and re-write 650Mb.

The prices start at £569.95 for an internal unit (external casing £60) with 650Mb cartridges for £50.

We'll bring you a full review as soon as we get our grubby mitts on one! Hi-Q are on ☎ 0181 9092092.



It can't decide if it's a CD-ROM drive (left) or an optical drive (right).

Vision on

If you use LightWave 3D, but you need some help or advice with this excellent 3D rendering program, you should try getting a place on one of Premier Vision's seminars. The seminars will run throughout July with half-day introductory seminars every Wednesday.

The one-day courses are divided into four categories: basic modelling; advanced modelling;

camera, lighting and animation techniques; and surfacing and texturing for professional results.

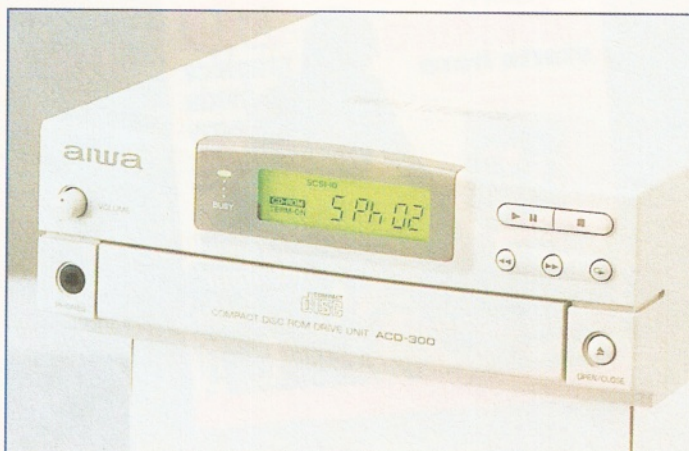
The half-day course costs £50 and the full-day courses cost £200 each. However, these courses are very popular, so we can't guarantee that there will be places available.

Call Premier Vision on ☎ 0171 721 7050, or fax them on 0171 721 7049.

Aiwa ACD-300

Aiwa have dropped the price tag on one of the sexiest-looking CD-ROM drives on the market. The ACD-300 is an external SCSI CD-ROM drive which is more than just a double-speed CD drive. It features audio-specific controls and output to truly make it a useful audio CD player.

The LCD display offers not only information about the type of CD in the drive, but also the usual information that we've got used to with audio CD players, but failed to demand on our CD-ROM drives. The LCD display shows the track number and time elapsed as well as SCSI ID numbers and information on Photo CDs. The cost is £149 from Aiwa ☎ 0181 897 7000.



Sister act

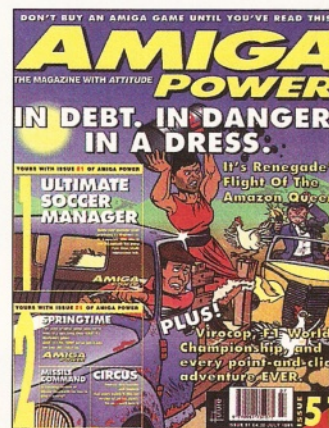
AMIGA FORMAT

From day-to-day to the last syllable of recorded time it's the same. The Amiga Format offices are bombarded with questions. Letters, faxes, E-mails, telephone calls – all from people wanting information desperately.

Well, we thought it was about time we put an end to it, so in our next spectacular issue we will be answering every question you ever had – probably.

And if that isn't enough, there will also be features on processors and the MUI utility, and reviews of Organiser, ProVector, Sensible Golf and Premier Manager 2. See you there.

Nick Veitch,
Editor,
Amiga Format



Phew, truly things do work in mysterious ways, as this month's Amiga Power proves conclusively, for we ended up with enough reviews, features and previews to exactly fill the mag. Only a true cynic would call that coincidence.

Point-and-click adventure games? They're a laugh, or are they? We investigate like never before and still find time to review Virocop, Flight Of The Amazon Queen and F1 World Championship Edition.

Funny, incisive and two disks on the front (as usual), Amiga Power 51 is out now. You can't miss it, it's the one with a burly transvestite on the front.

Cameron Winstanley,
Editor,
Amiga Power

Little Gem

Gillett Multimedia have launched the Little Gem micro audio mixer, produced especially for Amiga musicians. It features two-channel in and out sockets and has controls for bass, treble and volume. It has pan controls for the stereo positioning of each channel.

The Little Gem can be run from batteries or mains and so steals no power from the Amiga. As a sound-processor it can be used to filter sounds before sampling and during playback for when outputting to tape or DAT from the Amiga.

It retails for £69.95 from Gillett Multimedia ☎ 01353 669203.



On the ball

We can now report success with ShapeShifter, the Mac emulator mentioned in Silicon Chameleon, our feature on emulators this issue, page 38. After several problems with the program, we finally succeeded in getting correct ROMs as we went to press, but we haven't time to fully rate the program.

Also, we reported the bugs we found in Flexi-Link, page 47, to the author, who has acted on them and released an update. We shall be taking a look as soon as the new version arrives.

Needless to say, we'll keep you updated on how both of these progress.

Animated fonts



A still from one of the 12 animated MovieFonts collection.

Diskotech have developed a new collection of animated colour fonts for Amiga video enthusiasts. The fonts are compatible with a range of packages from Deluxe Paint III upwards. They work on all Amigas and in all screen formats.

The 12 fonts can be used for both animated and static titles and additional graphics enlarge the mix-and-match capacity.

The new 11-disk package, called MovieFonts, is available from Diskotech for £35 incl. Diskotech are on ☎ 01591 620242.

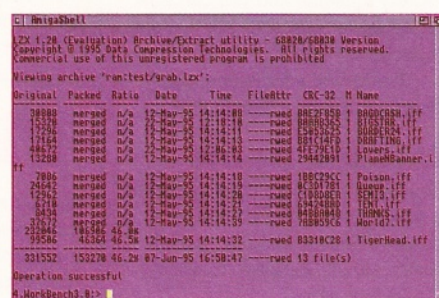
LZX 1.2

Serious Amiga users will already be familiar with LZX, the new archiver that outstrips the Amiga standard Lha. A new version has now been released that improves performance in both speed and compression.

We've been so impressed that it is now the new archiver used to cram all those goodies on to AS Coverdisks.

Version 1.2 has yet more up its sleeve since it can now de-archive Lha files, with the exception that it does it 10-35 per cent faster than Lha!

Evaluation copies should be available from PD houses (or you can find the whole archive on Amiga Format's disks issue 74) and registered users, who have their keyfile, will be pleased to know they need only get the new registered archive (again from a PD house) to upgrade.



The new version of LZX is butt-kickingly fast.

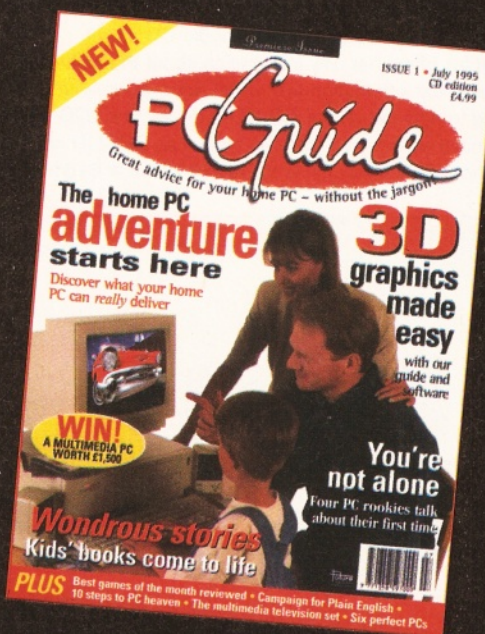
New magazines from Future

PC Guide

Not content with recently launching PC Attack, SFX and Total Football, Future Publishing have added yet another new magazine to their already fine stable of thoroughbreds.

PC Guide is monthly and is aimed at new users of home PCs and intends to make life less confusing to the complete beginner. The title promises to take "a straightforward, practical approach, helping new owners of multimedia PCs to discover the full benefits of their hardware and software."

There will be two versions of the magazine every month: one with a CD mounted on the cover; and the other with a floppy disk. The CD version costs £4.99 and the floppy version is £3.99. The first issue is in the shops now. If you've just bought a PC, you can't afford to miss it.



.net

The .net Directory

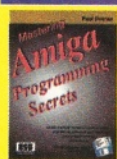
Future Publishing doesn't rest on its laurels for long, because on Thursday, 29th July you'll also be able to buy The .net Directory.

The .net Directory is your essential guide to the Internet. It consists of eight sections: Arts & Entertainment, Sport & Leisure, Lifestyle, The Net, Computing, Business, Academic, and Bizarre - something for everyone, in fact.

The .net Directory is a reviews-based, bi-monthly, listings-oriented magazine closely linked with Future Publishing's .Net mag. And it only costs £4.99.

Emerald Creative Technology

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PC EMULATION

PC Task 3



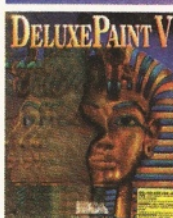
PC Task 3 allows you to run software designed for IBM PCs and compatibles on you Amiga! It emulates a 80286 based PC, so you can run Windows 3.1 and applications like Microsoft Word and Excel. On an AGA Amiga you can even run SVGA screen modes!

RRP £79.95 - Emerald Price £59.95

Upgrade from v2 £34.95 - please enclose your PC Task v2 disk
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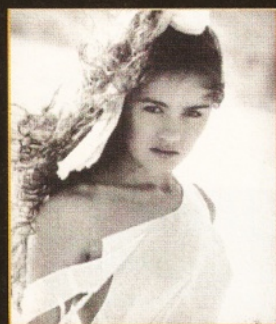
Image import

*It has been said that a scanner is probably the third most popular peripheral that people add to their Amigas. Having spoken at length to some of the manufacturers of scanners, **Larry Hickmott** can well believe that statement to be true.*

"The hand-scanner is the **cheapest** and most portable, while the flatbed delivers the best quality, but requires a higher-end Amiga."



An example scan done by the highly recommended Power Colour scanner.



An example scan done by the Alfascan 800.

The word scanner sounds so hi-tech that many people aren't sure what it means and which one will suit them best. That's why I'm sitting here surrounded by some of the most brilliant pieces of equipment available today for those wanting to import images into their Amigas.

Before we look at these, though, I feel that it is worth mentioning two other methods of bringing pictures into your Amiga, so that you have the full picture before you dip into your pocket to purchase a scanner. You could, for example, use a video digitiser or PhotoCD. Both have advantages and disadvantages and before we get down to the business of reviewing some scanners, a word or two about these options.

Roll the video

Video digitising is one, for example. This is a term which describes a piece of hardware like ProGrab or Vidi Amiga, that can convert a video signal into a form the Amiga can understand. Digitising, however, isn't very good for importing images that are already on paper, such as photographs, or for trying to capture line art and textual documents.

Another drawback to video is the fact that video digitising is also a low-resolution medium which is important to remember if you are going to output your work to paper. This is because DTP in the main relies on high-resolution images.

The second alternative is PhotoCD, which to my mind is more accessible than video digitising, because most people nowadays have access to a camera of some sort and all that's needed to complete the package is a CD-ROM drive. This latter piece of hardware enables you to drag the images off CD and on to your Amiga's hard disk. PhotoCD, however, like video digitising, is best suited for capturing people and objects and not pictures and text already on paper.

Which leaves scanning. Like the other two methods, scanning has its own advantages and disadvantages. On the plus side, scanning is great for capturing photographs, line drawings, illustrations and so on. It can also be used in conjunction with some suitable software to convert pictures of textual documents, into text that can be edited in your word processor.

One of the disadvantages lies in the fact

that you can't use a scanner to take pictures of people and objects. To do this, you have to capture the object or person on film. You can then have those pictures printed at a photo shop before using your scanner to import the images into your Amiga. All this could be done within a couple of hours. In contrast, if you were using PhotoCD, you would have to wait as many as 10 days for the CD to be 'developed'.

Decisions, decisions

Having decided on a scanner as your choice for importing images into your Amiga, there is the small matter of choosing the scanner you require for the type of work you do. At the time of the review, the number of scanners to choose from if you own an Amiga was fairly small, although this is set to rise dramatically over the coming months leading up to Christmas. This is mainly thanks to the Squirrel SCSI Interface and some development work by Amiga software publishers.

Nova Design, publishers of ImageFX 2.1, have just added support for the HP ScanJet range of flatbed scanners, on top of the support they already have for the Epson family of scanners. Nova Design are also starting development on software for Epson scanners with SCSI Interfaces, such as the Epson 6500, 8500 and 9000. I also believe Power Computing will move in this direction.

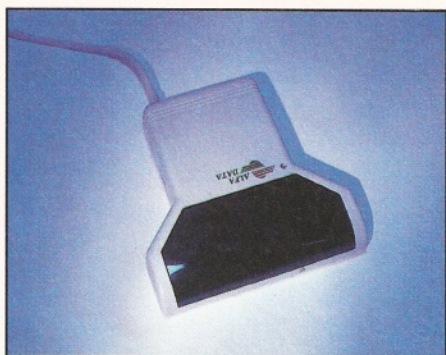
Almathera, publishers of the very popular image processing program Photogenics, are also talking of bringing out scanner modules for Photogenics at realistic prices. It doesn't end there though. Gasteiner have also told me about a 2,400 dpi flatbed scanner they are now selling for £399, including software for the Amiga. This is sure to be out and about by the time you read this, so keep your eyes peeled for a review in Amiga Shopper.

Crossroads

There are two main types of scanner that Amiga-owners are likely to come across; the flatbed scanner and the hand-held variety. Of the two, the hand-scanner is the cheapest and most portable while the flatbed delivers the best quality, but requires a higher-end Amiga.

Once upon a time, the price difference between the two types of scanner was huge. Flatbed scanners sold for at least £700, while





The Alfascan 800 is a high-resolution hand-scanner that produces good quality line art, but is sadly let down by software that needs to be much more powerful.

hand-scanners generally sold for about £200. Now you can get flatbed scanners for less than £500, while hand-scanners still cost between a £100 and £200. The old argument of flatbed scanners being out of reach of everybody but the very rich, no longer holds any water. In some cases, the difference between a flatbed and a hand-scanner is less than £200.

Which leads us to quality and whether it's worth spending that extra money on a flatbed. This decision is strictly a subjective one and if pushed, I would say the extra quality and convenience of a flatbed is definitely worth it. hand-scanners, for example, are restricted to small images (no wider than four inches) unless you have the time and patience to try and join two halves of an image together. Scanning an image with a hand-scanner is also an art that takes time to master, whereas scanning images with a flatbed is as easy as making a photocopy.

I've been down both roads having started out with a hand-scanner and it's hardly surprising that I'm much happier with the flatbed type. When asked if the hand-scanner has any advantages, it's difficult to think of any, other than price and portability. Price, however, is, as we know, a big advantage these days and is not to be underestimated. Especially when you take into account the extra hardware you need for your Amiga when using a flatbed scanner.

Very handy

That is why the hand-scanner is still the most popular choice for Amiga-owners and explains why there are more hand-held scanners than flatbeds in this review.

A package for a hand-held scanner usually consists of a scanning-head, an Interface, a power supply and some bundled software so that you can use that scanner with your Amiga. The first thing you will notice about a hand-held



The Alfascan 800 comes with its own software which is a bit quirky, e.g. saving images like this in black-and-grey instead of black-and-white.

scanner is that most of the scanner-heads look very much the same. In some cases they are the same, as many scanner-heads are manufactured by the same company and then rebadged.

Appearances, though, can be deceptive and although many scanning-heads may appear to be the same, what's under the hood can vary dramatically. Take the two Powerscan hand-scanners. These heads look very similar, but the technology used under the Shell is very different. This is why it's important to look very closely at a scanner before handing over your money.

For example, you may decide that because you only have a black-and-white printer you only need a monochrome scanner. This couldn't be further from the truth because the quality of the greyscale images (photographs in other words) you can get using a colour scanner is much better than similar images scanned using a monochrome scanner. This is evident in the samples produced for this review.

Another factor you might want to look at is the resolution of the scanner. If you scan a lot of black-and-white sketches or line art, a high-resolution scanner is in a lot of cases going to be a better choice since the images will print better. Let's say you have a black-and-white logo an inch big that you want to use on a letterhead and the printer you are going to use for printing your letterhead is the Epson Colour Stylus.

This printer can produce dots 1/720th of an inch because it has a maximum resolution of 720 dpi. In order to print your logo the same size as the original, without any jagged edges appearing, you'll need to scan it at a resolution that closely matches that of your printer, which in the case of the Epson Stylus, is 720 dpi.

Scanning photographs is less dependent on resolution and more on the number of colours the scanner can recognise. This is why a 24-bit scanner produces much better quality photographs than a 2-bit scanner that can only produce black dots in amongst white space.

Which leads me to the factors I will be taking into account in judging the following scanners. Each scanner was tested by scanning three items: a colour photograph, a piece of line art and some text. The final percentage is based on the quality delivered in all three tests against the cost of the scanner.

Alfascan 800

From Golden Image UK comes a high-resolution black-and-white hand-scanner. Whereas most hand-scanners these days have a maximum resolution of 400 dpi, the Alfascan 800 enables

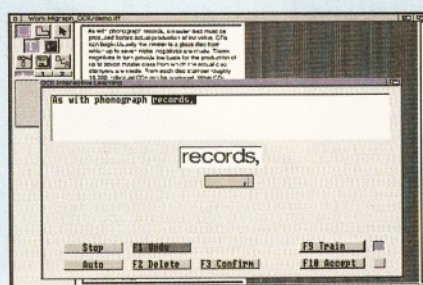
OCR: converting a picture into text

Have you ever had to type out a load of text from a book thinking that there must be an easier way? Well there is. It's called OCR, which stands for Optical Character Recognition. Take the situation I find myself in every month with lots of nicely type-written letters that I need to get on to the pages of my Amiga publishing magazine Em. The job of typing these out could take hours, but by using OCR, this is reduced to minutes.

I have to admit to using a package on the PC for this because as far as I know, no OCR package on the Amiga as yet supports flatbed scanners. What there is though is Migraph OCR, which enables you to load in scanned text that has been saved to disk as an IFF-ILBM. The text on the page can then be converted to ASCII and edited in a word processor.

Migraph OCR also supports many hand-scanners, which lets you scan a column of text direct from the software and immediately process it. This is fine for columns of text less than 4 inches wide, but once you get text in columns wider than that, the whole process becomes quite painful.

The accuracy of the conversion from picture to ASCII text, depends on the training you give the software. You can, for example, train the software on lots of different types of



When it comes to converting scanned text into ASCII, Migraph's OCR software is great.

text and once it's built up a large enough dictionary for itself, the software in many instances can be left to convert scans automatically, making a minimum of mistakes.

To make use of this OCR software, you will need a hard drive and a fair wack of memory, because text for OCR really has to be scanned at a fairly high-resolution so that the text doesn't start to break up, something which can cause the OCR software all sorts of problems. For your OCR software, call either Golden Image ☎ 0181 900 9291, or Power Computing ☎ 01234 273000.

you to scan images at 800 dpi, providing you have the necessary memory in your Amiga.

Costing £99, the Alfaskan 800 package comprises an 800 dpi black-and-white scanner, an Interface which plugs into the parallel port, Alfaskan software and an AlfaData scanning ruler for helping you to perform straight scans.

The most notable part of the package is the scanning-head. It has two modes, high and low, selected using a switch on the bottom of the scanner. In high-resolution mode, you can scan using resolutions from 500 to 800 dpi while in low resolution mode, the available resolutions range from 100 to 400 dpi.

Other buttons include those for making the scan lighter or darker, selecting the resolution and, finally, a button which is depressed when you want to scan your image. These are all quite normal on a hand-scanner.

The Interface joining the scanner to the Amiga, consists of a small plastic casing attached to a ribbon cable which in turn connects to the parallel port. There is, however, no through-port on the Interface preventing you from attaching a printer at the same time. A real bind considering how difficult it is to remove the Interface from the Amiga without damaging the ribbon cable.

The software for the Alfaskan 800 is more or less just for scanning and little else. There are no editing tools, for example, although it does come with a function for merging two scans together so you can scan a full A4 sheet.

In practice, this takes a lot of work to get right and is only for those with a lot of patience and low blood pressure.

When saving line art scans to disk, I was amazed by the software's persistence in saving a two-colour image as black-and-grey and not black-and-white. This can, however, be easily corrected in DPaint or a similar painting program. Greyscale images can be created within the software from the dithered black-and-white information coming from the scanner.

Alfaskan 800

A no-nonsense scanner that is great for doing OCR and line art. Because of its high-resolution head, you can produce huge scans of logos which when scaled down in your publishing software print sharper on high-resolution laser printers.

Price: £99

Supplier: Golden Image UK

Contact: 0181 900 9291

Verdict: 82%

Alfaskan Plus

My, how times have changed. Not so long ago, a hand-scanner with OCR and TouchUp would have set you back a pretty penny, but nowadays, the lot costs less than £140.

This package is aimed at the person wanting to dabble in a bit of everything, from scanning line art and photographs, to converting type-written text to ASCII that can be edited in a word processor.

The hardware is based around a tried and trusted scanning-head which enables you to

Scanning software

Getting the image into your Amiga is one thing, altering it is usually quite another. You might, for example, scan a photograph and want to add some text to it. To do this with a 24-bit image you'll need a program that can work in 24-bit like Photogenics, Art Department Professional, ImageFX, ImageMaster or Brilliance 2.

Some of the best value packages are ImageFX 1.5 (£99), ImageMaster (£79) and Photogenics (£59). They will all enable you to carry out many alterations that no paint package or scanning software will.

Another program worth a shout is DPaint 5. It can be used for making unwanted people or objects disappear or to compose two or more images to make a montage.

As you can see, the hardware is not the only important factor in the scanner equation. The software plays a very important role and anyone wanting to do a bit of everything will need an OCR package like the one from Migraph, a paint program such as DPaint V and an image processing package like Photogenics, ImageFX, Art Department or ImageMaster.

This will not only require a fair wad of notes to acquire the software, but even more of the legal tender to boost your hardware so that it can handle all this power. Two things



Programs like ImageFX can be used to successfully remove unwanted lines like this piece of thread that spoils an otherwise good photograph.

you will definitely need if you want to play with images seriously, is a big (250Mb plus) hard drive and lots of memory.

If you don't have either, on the one hand you'll find yourself limited to working with low-resolution pictures and, on the other hand, you'll soon run out of storage space for them.

scan at resolutions from 100 to 400 dpi in modes for both text and photographs.

The scanner is linked to an Interface that plugs into the parallel port and is powered by separate PSU (Power Supply Unit). For those with a printer, there is no through-port on the Interface, which means shutting down your computer each time you want to swap from the scanner to the printer. The Interface is also a handful to remove.

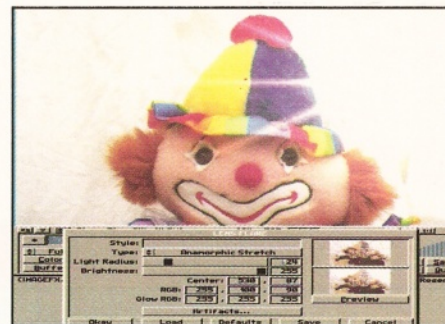
With the scanner comes a bundle of software including the much heralded TouchUp 3, OCR software and Merge It, all from Migraph. The program most users will take advantage of with the Alfaskan Plus is TouchUp.

This program, which is starting to show its age, is much more than just a scanning program. It's more like a black-and-white DPaint and, as such, is extremely versatile. It enables you, for example, to crop large images, remove isolated pixels and if required, enables you to clear unwanted bits and pieces or add new ones.

Where TouchUp falters is with its functions of converting a dithered black-and-white image to a greyscale one. Not that it doesn't do a good job, it's just the functions to save the image to disk or display it on-screen are very outdated. Take the Save As a Greyscale feature. You get a number of choices, but the only one that produces a 256 greyscale save is one in the TIFF format.

All well and good if you have a program that will convert TIFFs to IFF-ILBMs, but clearly not so good if you don't. There is a 'Save As 24-bit' button, but this has never been 100 per cent successful and I'm sure it wouldn't take a lot to change it to a more logical 'Save As 8-bit' button, saving the user the hassle of having to convert TIFFs to the Amiga format of IFF-ILBMs.

Making up for this hiccup is the OCR software which is truly superb. As for the



Despite the appearance of having used a star filter to take this picture, the special effect has actually been added by using ImageFX 2 from Silica Systems.



The Alfaskan Plus is possibly the best all-round package with software for scanning, OCR and merging two scans together.



The Powerscan Colour is the only colour hand scanner available at the moment for Amiga owners. It comes from Power Computing and what a good one it is too.

Merge-It software, it unfortunately wasn't included in the package for review, but past experience with Merge-It has taught me that it's very easy to use.

Alfascan Plus

The Alfascan Plus is a very good-value package, especially considering all the software that is bundled with it. Pity there is no through-port on the Interface.

Price: £139

Supplier: Golden Image UK

Contact: 0181 900 9291

Verdict: 87%

Powerscan Colour

This is the only colour hand-scanner available at the moment for the Amiga. This is a far cry from 18 months ago when you had a choice of three colour hand-scanners, but, unfortunately, all of these have now disappeared leaving only a single mind-boggling 24-bit model from Power Computing.

I say mind-boggling, because the 24-bit head is capable of seeing up to 16.7 million colours compared to 4,096 for the old 12-bit heads and 262,144 colours for an 18-bit scanner.

The new Power scanning-head is an all-singing-and-dancing one, controlled from the accompanying Powerscan 4 Professional software. To complete the package, is the unique Power Computing scanning Interface, complete with a through-port so you can attach



Both the scanners from Power Computing come with Powerscan 4 Professional, a program that has lots of tools for editing your pictures.

a printer to your Amiga without having to keep swapping cables.

In use, the Powerscan Colour is not as easy to use as a similar greyscale model. This is because the scanner has to pick up a lot more information from the image being scanned than a greyscale model would have to. This means the scanning-head has to be moved very slowly over the image and if you move it too fast, you'll find the scan is aborted.

The scanner is not just for colour scanning though. The software lets you choose from modes for greyscale and black-and-white images. The mode most will want to use is Super Colour, however, and providing you have the patience, the scanner will deliver quite superb results for a colour hand-scanner.

Although the final processed image didn't quite match that of the much more expensive Epson GT-9000, it was a marked improvement over previous colour hand-scanners reviewed here in Amiga Shopper in days gone by.

The only criticism I have is that colour images contain a lot of contrast after being scanned, but this can be reduced by altering the gamma and contrast using an image processing program such as Powerscan 4 Professional or ImageFX. By doing this, the results from the Powerscan Colour can be fine-tuned so you end up with a superb-looking picture.

Just as impressive are greyscale images produced by the Powerscan Colour. These are true greyscale images and therefore the quality is quite a lot better than similar ones from black-and-white scanners.

I also found that by using the Super Colour mode, I could produce quite interesting looking greyscale images with a hint of colour in them. This produced results that



TouchUp is a program that is still the business despite being past its sell-by-date.

Jargon busting

n-bit – When working with graphics, a term you will come across very often is 8-bit, 24-bit, 30-bit and so on. The term n-bit simply refers to the number of bitplanes, which in the case of 24-bit is 24. The more bitplanes you have, the more colours you have to play with. A 24-bit image can, for example, contain as many as 16.7 million colours while an 8-bit image contains only 256.

Bitmap – When a scanner converts a photograph or line drawing into a digital form the computer can understand, it is made up of pixels that form the building blocks for the image. This type of picture is commonly called a bitmap and there are various formats available such as IFF-ILBM, GIF, PCX, JPEG, BMP, TIFF and others.

CCD – An acronym that you will frequently see when reading about scanners. CCD stands for Charge Coupled Device and is a type of sensor used in scanners and video cameras.

Digitiser – A term commonly used to describe a piece of hardware that converts the signal from a video source (TV, camera or tape) to a digital form that is understood by the computer. Examples of digitisers are ProGrab and Vidi Amiga.

Dithering – A process of simulating lots of colours using a mixture of just a few colours. For example, it is possible to simulate the colour grey by using a mixture of black-and-white dots.

Gamma – A method of adjusting the brightness of an image without losing detail in the highlight and shadow areas of an image.

Greyscale – Used to describe images consisting of two or more shades of grey.

A black-and-white photograph is more correctly called a greyscale or continuous tone image. A typical photograph will have up to 256 shades of grey although when I tested some of the samples in this review, many had less than 200 greys.

Dots Per Inch (dpi) – Used to measure the resolution of an input device like a scanner or mouse, or output device such as a printer or monitor. The smaller the dot (pixel) produced by a device, the more dots it can fit into an inch space and therefore the higher its resolution.

Interpolation – A software-based method used by many scanners to double the true maximum resolution of the device.

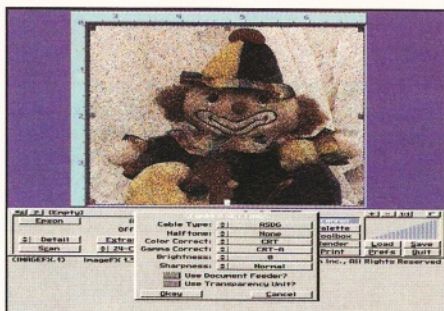
For example, many scanners have an optical resolution of 300 dpi, but by using interpolation this can be increased to 600 dpi. The software does this by calculating the appropriate colour value for pixels positioned between those actually scanned.

Optical Character Recognition (OCR) – The process of converting text that is scanned, into a form that is editable in your word processor.

RGB – Acronym standing for Red, Green and Blue which are the colours (or percentage thereof) displayed by most monitors and also used by many scanners to capture colour images.

SCSI – Refers to Small Computer Systems Interface. A type of connection used for joining peripherals to your computer. An Amiga example is Squirrel from Hi-Soft.

TWAIN – An Interface developed by many leading companies that enables those on the PC to operate many types of scanners from a single Interface in their software.



From Power Computing comes ImageFX 1.5, a program suitable for driving the Epson range of flatbed scanners.

were much more interesting than a normal greyscale image devoid of all colours except shades of grey.

After many hours of playing with this new 'toy', the only Achilles heel I could find with it, was the scanner's black-and-white mode which produces images that lack detail. When scanning text, typefaces like Times break up, while others, like Helvetica, scan okay.

Powerscan Colour

Being the only one available, you don't have a lot of choice when it comes to colour scanning, so it's just as well this scanner produces excellent results. Because it's several hundred pounds cheaper than a flatbed model, it makes a good half-way house for those with somewhat limited resources.

Price: £199

Supplier: Power Computing

Contact: 01234 273 000

Verdict: 90%



Star buy

Powerscan Greyscale

Anyone looking for a budget scanner should take a long hard look at this one. Priced under £100, the Powerscan Greyscale scanner is not only good value, it also comes with the unique Interface which allows you to attach a printer to your Amiga, as well as the scanner.

The Interface even has a little foot on it so it doesn't hang in mid-air. Completing the package is the Powerscan 4 Professional software and a comprehensive manual that covers both the monochrome and colour scanners produced by Power Computing.

Getting it all up and running is dead easy. It takes only a minute or so to install the hardware and software and before you know it, you're well on your way to your first scan. Like most black-and-white scanners, you get four scanning modes. Text is for scanning line art and text of course, while Photo (three modes in this) is used for scanning pictures containing colours or shades of grey. These include photographs or illustrations.

Like the Alfascan scanners, this one scans everything in black-and-white, including photographs, which are scanned using a black-and-white dither. To convert them into a form that resembles your original picture, the software comes with an image processing

function which converts the black-and-white dots into shades of grey.

This it does very well, creating greyscale images that contained more shades of grey than any other black-and-white scanner.

Powerscan Greyscale

A first-class black-and-white hand-scanner that is made all the better by the excellent software which enables you to produce good-quality greyscale images, as well as black-and-white ones. OCR software is also available separately.

Price: £99

Supplier: Power Computing

Contact: 01234 273000

Verdict: 89%

Epson GT-9000

For a long while, the Rolls Royce of Amiga scanners has been the Epson GT-6500. That's about to change. By the time you read this, Epson will have made the decision to remove the parallel port from the GT-6500 and stick to a SCSI-only Interface. This won't be a problem providing publishers like Almathera, Power Computing and Nova Design, come up with drivers that will work through the SCSI connection.

It isn't, however, the only problem facing the GT-6500. Epson have also said it will only be available in bundles with PC software. If that is the case, I can't see Amiga-owners going out and buying a scanner loaded with PC software and paying more than what they could be paying for the better Epson GT-8500 or Epson GT-9000. This is because these scanners will be available with a parallel port as standard and also available without all the PC software.

In light of this, I decided to take a thorough look at the flagship model, the GT-9000. Now before you start to think that this machine is way out of everybody's financial reach, I have been told by Epson that it will be selling for as low as £550 in discount stores. That's less than the GT-6500 sells for now in many other High-Street outlets.

The GT-9000 is a 30-bit (10-bits for each RGB) flatbed scanner that can scan in resolutions up to 2400 dpi. It comes with both SCSI and Parallel connections and as for software, I had no problems using it with versions 1.5 and 2 of ImageFX.

The results were very good indeed, considering it's a scanner costing well under £1,000. They were certainly much better than anything I've seen from my very own Epson GT-6000 and well ahead of the quality found with colour hand-scanners.

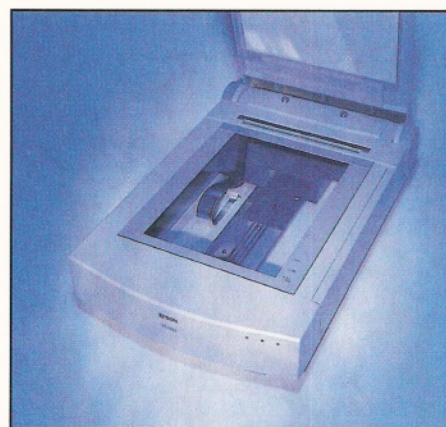
The first thing that hit me about the GT-9000 was the speed. The preview of an image was twice as quick as the GT-6500 and a detail scan was completed with a similar result.

There's more. The GT-9000 also accepts both a document feeder and transparency adaptor, although if you are intending to scan transparencies, Epson do advise that these are at least 4"x5" for ultimate quality.

Now this all sounds rather too good to be true and there is a but. A big one at that. If you



The Powerscan Greyscale is without doubt one of the best packages for Amiga-owners wanting to produce good quality greyscale images at a low, low price.

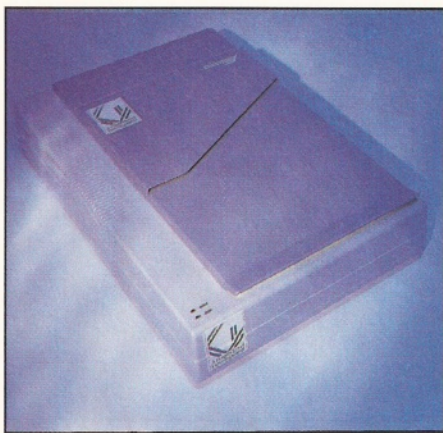


Those wanting colour input need to look no further than the superb flatbed scanner GT-9000 from Epson.

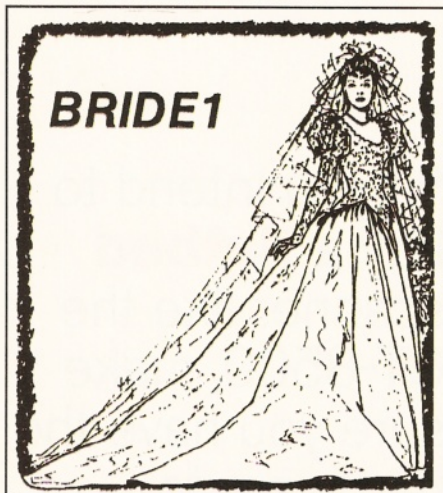
"If you intend to buy a **flatbed** scanner like the GT-8500, make sure you have the hardware to support it."



An example scan done by the Epson GT-9000.



The Fourth Level 4800 is a new breed of flatbed scanner priced under £600, producing excellent results while being easy to use.



Another example scan done by the excellent Epson GT-9000.

intend buying a flatbed scanner like the GT-8500, which is sure to replace the GT-6500 as the Amiga-owners choice, or the GT-9000 reviewed here, then make sure you have the hardware to support it.

Having a scanner that has a maximum resolution of 2400 dpi is one thing, having an Amiga that can handle this is quite another. With 7Mb of memory in my Amigas, scanning proves to be quite a chore and I'd advise anyone who doesn't have other options like another computer with more memory, to boost their Amiga's memory to at least 10Mb, if not 20Mb.

Epson GT-9000

This scanner is so good, I dare Epson to park one next to my Amiga! Anyone else daring to splash some money around is well advised to make sure they get a GVP or ASDG cable to attach it to a parallel port, as well as some software, like ImageFX, to drive it.

Price: RRP £659

Supplier: Epson UK

Contact: 0800 220546

Verdict: 90%

Star buy



Fourth Level 4800

Flatbed scanners have always been a rare breed on the Amiga. The main reasons for this hinged on two facts: a lack of software to drive the scanners and the reliance on the SCSI connection by many popular brands.

As many Amiga owners will know, until Squirrel from Hi-Soft came along, the SCSI connection on the Amiga side of things was restricted to a small percentage of the Amiga population. That is, those with boxed Amigas. With such a small market, the opportunity to make any sort of profit creating and selling scanning software was severely limited when it came to SCSI scanners.

One of the catalysts for change has been the Squirrel SCSI adaptor. It's opened up the market so much, it is now viable for developers to spend time and money coming up with software for many popular scanners.

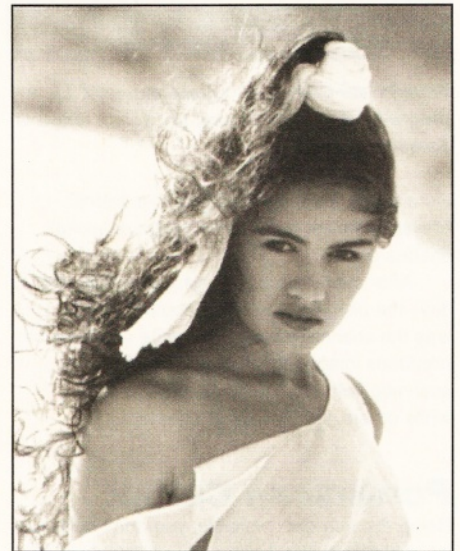
One of the first on the scene is the 4800 from well-known Amiga developers, Fourth Level Developments in Bristol. The name of the scanner by the way, comes from the maximum resolution it is capable of; i.e. 4800 dpi. The 4800 was originally conceived to work with SCSI cards like the Oktagon, but, as I found in this review, it works just as well with Squirrel, which is a necessary purchase if you intend using the 4800 (or any other SCSI scanner) with the Amiga 1200.

The scanner from Fourth Level is one of a new breed finding their way to these shores from the Asian Pacific region at prices we could only dream about not so long ago. The 4800, for example, is priced below £600 (with VAT) and that includes software for the Amiga, PC and Macintosh.

After taking a little time to get used to the software, which is fairly basic compared to some scanner drivers, I was soon producing scans on par with the lower resolution Epson 9000 (2400 dpi). The main difference between the two, besides the 4800 being a higher resolution

Samples for everyone

Only you can really decide on the merits of price versus quality and to help you out, all the images used to judge the scanners in this review are available from LH Publishing ☎ 01908 370230.



Here's an example of a 256-colour scan by the Epson GT-9000.

scanner, is the driver software. The Fourth Level package is very basic and, at the time of the review, still under development. Compare this to the excellent ImageFX and it's no contest.

Although quite basic, the Fourth Level software does control the scanner very well, producing first-rate results and more importantly, letting you scan directly to hard disk. This is useful for those with limited RAM, because scanning in full colour with programs like ImageFX, requires sandbags of memory.

Fourth Level 4800

Although the software isn't as elaborate as that for the Epson, the 4800 is quite a bit cheaper which is why I've rated it almost as highly as the Epson. Not only is the 4800 well priced, it also produces good quality images and the software comes free. Look out for a baby-brother called the 2800 soon which will be even cheaper. ■

Price: RRP £586.32

Supplier: Fourth Level Developments

Contact: 0117 985 4455

Verdict: 88%

Final verdict

Without trying to sound elitist, there is no doubt the Epson GT-9000 is the best scanner. It isn't for everyone though and when money's tight and you need colour input, how about trying the Powerscan Colour. If all you want is a black-and-white scanner, though, and your system is fairly modest, then either the Powerscan Greyscale package, or the Alfascan Plus will do very nicely.

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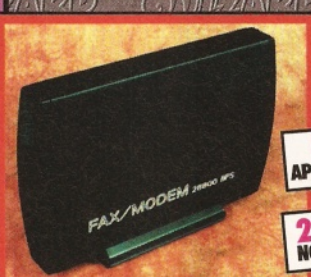
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Straight talk

At Escom's recent press conference, it was revealed that Scala's MM300 was to be bundled with every Amiga sold from now on. **R Shamms Mortier** puts Scala's John Hillman in the hot-seat.



All new Amiga converts will soon be very familiar with this brand name.

"Scala is well **pleased** that Escom has bought the assets of Commodore International."

Before we begin, let me say that there are very few Amiga companies that can boast as successful an operation over as long a time period as Scala Inc. They were one of the Amiga's first developers in what has now become a frantic and highly competitive field, multimedia.

Their products include such famous packages as MultiMedia (MM) and InfoChannel. I know several users of Scala products on this end – people involved in both the business and education community, who own and use their Amigas strictly because of Scala software support. This interview with Scala's director of marketing, John Hillman, took place over a period of several weeks in May.

Scala is known throughout the Amiga realm as a resounding success-story. What are the specific ingredients and mindset that have lead to that success over the years?

Why is Scala a success? Scala has always defined its business as computer television, using a desktop computer to author multimedia presentations that, when played back on another desktop computer (or now, on a whole new generation of set-top boxes), has the look and feel of a television production.

Scala has driven the strategy to its present success. At this point, Scala is introducing its new BackBone software architecture. This architecture is hardware, Operating System and even content independent. By content

independent, we mean that Scala will accept the standard art files and other multimedia authoring packages.

We are doing this because it is our belief that computer graphic artists all have their favourite tools. Instead of getting computer graphic artists to convert to using our tools, we are focusing our efforts where they belong, on computer television. The playback of any chosen files with Scala products now, and in the future, will be seen as a television production.

It is rumoured that when Commodore went down Scala was well prepared with a stockpile of what it needed in terms of machines and parts, enough to last for a long time. How did Scala get wind of the collapse and what was done to prepare for the chaotic interim?

It was very clear to the world at that time that something very dramatic was likely to happen to Commodore. When the news of the collapse was broken, we were prepared and acted as quickly as possible. We bought all the available Amiga 4000s in Scandinavia and Germany.

Scala recently released MM400 in Europe only, skipping this upgrade release to the US market. Is the market for Scala's Amiga multimedia-ware substantially different in Europe compared to the US?

We have many more individual users in Europe than in the US, where we have concentrated on the marketing of our InfoChannel product.

Scala is also involved as a major multimedia creative development team for high-end international firms. Can you comment on this?

Scala's business strategy is to pursue the development of new media networks. These networks require computer and display hardware manufacturers for platform design, telecommunication firms for network support and content firms for application development.

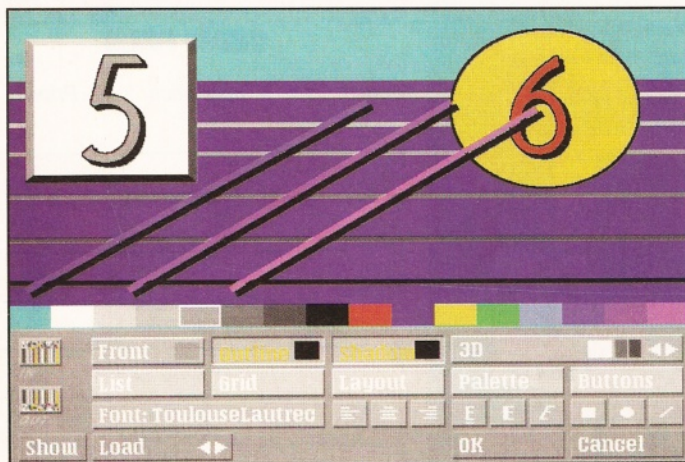
Scala has pursued corporate alliances with companies that provide these products and services. To date, Scala has formed alliances with Thorn EMI for television monitor networks, General Instrument for the next generation of set-top boxes, Ameritech for telecommunication networks, and NBC On-Site for content.

When Commodore went down, Scala was there to pick up the best people. Who are they and how has everything worked out in terms of their integration?

Jeff Porter, often called the "Father of the Amiga", is now Scala's vice-president of engineering. Other Commodore legends now working for Scala's R&D group include: Dave Haynie, Michael Sinz and Randall Jesup.

Other strong ex-Commodore names within our engineering team are: Peter Cherna, Darren Greenwald, Scott Drysdale, Jerry Horanoff, Ken Farinsky, John Orr, John Schilling, Jim Barkley and Wayne Lutz. We have engineering teams in the United States and in Norway, as well as two developers in the Netherlands. They all work very closely together.

How familiar are you with Escom? Is the coming Euro-centricity of the new Amiga



Scala combines the power needed for multimedia presentations with user-friendly interfaces.

Since people are never satisfied with a few options, Scala attempts to supply every type of effect you can ever imagine needing.



organisation projected to be a problem for Scala? [This interview was conducted before Escom's press conference in Frankfurt - Ed.] Scala started in Europe and we continue to have a strong European base with an extremely experienced and competent engineering team. Escom's European base represents no problem at all to us.

Considering the present state of the market, is it worth bringing the Amiga back on line? What do you think a revived Amiga will look like?

The ever increasing price of Amiga hardware is a good indicator of the continued interest and potential market for Amiga technology. This demand is particularly strong in regard to cable head-end applications.

To succeed in this marketplace, the new Amiga will have to adapt more than ever. By adapt I mean conform to the existing industry standards, such as keyboard, mouse and floppy drives, as well as to accept and manipulate standard industry artwork and files. This can all be done through Scala.

Are there any untapped places where the Amiga market might still thrive and grow?

The video tricks that one is still able to perform on an Amiga are still, and will continue to be, unique in many ways. The Amiga will continue to thrive where these video tricks are most appreciated, especially in regard to professional multimedia applications such as kiosk networks

(using Scala multimedia tools, of course), private television networks (using Scala's InfoChannel), or head-end cable applications (using Scala's InfoChannel and Speciality FX).

We hear a lot about LINUX as a possible operating system for a new Amiga. Comments?

(Pregnant pause) No comment.

Is Scala interested in working with Escom as a developer of new wears, or as a consultant?

We hope to work very closely together with Escom in the future. It is at this point, however, too early to say exactly what form that co-operation will take.

Can you elaborate?

We are well pleased that Escom has bought the assets of Commodore International.

What do you think of the possibility of an Amiga on a card for a Power PC?

The Amiga on a card idea has been discussed for quite some time and there are obvious benefits in bringing Amiga video capabilities to the PC. If Escom chose to invest in developing this technology, Scala would definitely support it.

What is Scala's position as far as advancing its Amiga software line? Would there have to be a discernible growth in the Amiga market to make that worthwhile?

At the moment we are concentrating on

Scala MM has been through many incarnations. See page 36 for Gary Whiteley's review of the latest version - MM400.



Stop press!



The Escom press conference announcing their plans for the Amiga hadn't taken place at the time that R. Shamms Mortier wrote this interview. At the

conference, Escom announced that Scala MM300 will be bundled with every Amiga that they sell from now on.

Amiga Shopper asked Scala's Information Manager, Dag I. Danielsen how else they saw Scala and Escom working together in the future, and what other products they had lined up for the Amiga.

He replied, "Scala will continue to provide software products for the Amiga platform and we look forward to working closely together with Amiga Technologies on new projects. So far we have only had overall discussions and no details have been decided, so we would like to come back with more information."

You can rest assured that we will bring you more news as soon as we receive it. See page 14 for our Special News Report.



The interface doesn't look incredibly exciting, but consider the results!

developing and bringing to the market the first products based on our new Scala BackBone software architecture.

These products are for Intel-based PCs. Given a revival of the Amiga marketplace, we will bring this architecture to the Amiga.

In Scala's opinion, what would be the situation that would be the best of all worlds as far as the Amiga is concerned?

For Scala, the best situation would be that the Amiga platform returned and is positioned very effectively as a speciality video computer. Given this, Scala can continue to grow in its existing markets as well as to explore other platforms.

What products is Scala planning to take to the marketplace in the near future?

Scala intends to ship its first Intel-based wares in the third quarter of 1995. This product will be the English version of MM100.

Non-English versions of MM100 will ship shortly thereafter. Scala will ship the English version of InfoChannel for Intel-based architecture before the end of the year. ■

Scala Incorporated can be contacted on ☎ 001 703 713 0900, or Fax 001 703 713 1960.

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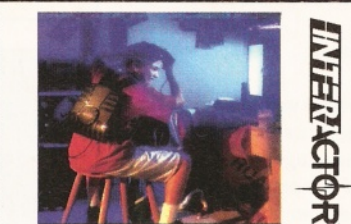


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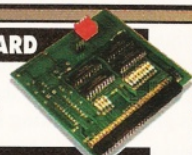
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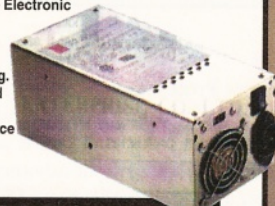
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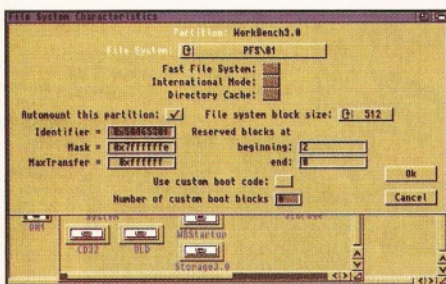
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Turbotech Clock Cartridge

Your Amiga will always know what day it is with this handy device – even after it's been switched off! Once installed, your Amiga will boot up with the correct time and date already set. Simply fits into the disk drive port (or on the back of your second drive). Complete with software.



Description	Turbotech Clock Cartridge
RRP	£19.99
AS price	£17.99
Order code	AMFCLO



Ami FileSafe

The new "de facto" standard filing system for the Amiga. Not only does Ami FileSafe achieve greater speed and efficiency than FFS, it also brings the added security of a filing system that can survive system failures, Guru meditations and crashes without causing disk block errors.

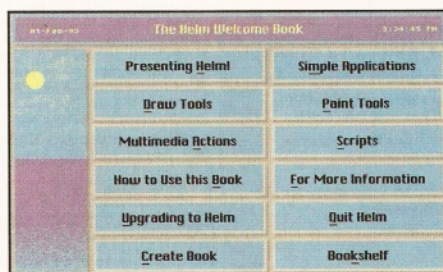
Description	Ami FileSafe
AS price	£69.75
Order code	ASAFS

Mouse 'n' Mat

At last! A quality replacement-mouse at a bargain price, complete with mouse mat. The 260dpi resolution mouse is 100% Amiga- (and Atari ST-) compatible and both buttons are fully micro-switched for maximum reliability and performance.



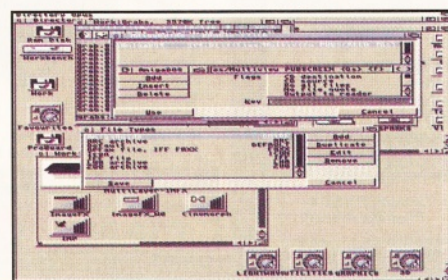
Description	Mouse 'n' Mat
AS price	£12.99
Order code	AFMM



Helm

A true multimedia authoring system for the Amiga, Helm earned 91 per cent when reviewed by our Consultant Editor Nick Veitch in Amiga Format. Create custom image editors, personal information managers, presentations, kiosks, free form databases, or educational courseware. Helm is both an authoring system and a graphics program, combining draw, paint and image processing tools with a scripting language, a hypermedia database manager and an assortment of user Interface objects.

Description	Helm
AS price	£99.95
Order code	AMF503



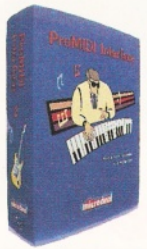
Directory Opus 5

This latest incarnation of the superbly powerful and well-designed file manager received 92 per cent and an Amiga Shopper Star buy award in issue 51 (see page 104 for back issues if you missed that one). Directory Opus 4 was brilliant and version 5 is no exception. Now this excellent program can be yours for £10 less than the RRP of £59.99.

Description	Directory Opus 5
AS price	£49.95
Order code	ASOPU

MIDI Interface

Test your Amiga's musical talents with the fully-featured ProMIDI Interface. You can connect synthesisers and drum machines to your Amiga and use the samples with Amiga Format's Music-X and OctaMED Coverdisks.

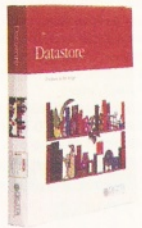


**save
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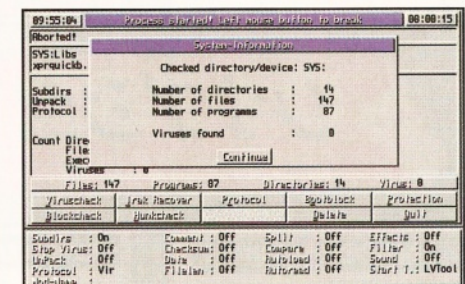
Description	Midi Interface
RRP	£24.95
AS price	£19.95
Order code	ASMIDI

Datastore

Datastore is an accessible and powerful database. The number of records is limited only by the amount of RAM you have available (at least 1Mb with WB2 or 3). Easystart templates that accompany the package include Club Membership, Recipes, Address Book and an Amiga Format magazine guide. The Amiga Shopper magazine guide, on the March AS47 Coverdisk, has been designed to be used with this ground-breaking release.



Description	Datastore
AS price	£49.99
Order code	AFAST



Antivirus

Siegfried Antivirus Professional – to use its full name – is an essential buy for those who suffer from virus attacks. It can be used with all types of Amigas with an 1.3, or advanced Kickstart version and 1Mb RAM. Save £5 off the RRP of £39.99 by buying from AS!

Description	Siegfried Antivirus Professional
AS price	£34.99
Order code	ASHVIR

AS binder

If your mags live in large piles on the floor, and you can never find the one you want, then keep your AS collection neat and tidy with these practical, yet stylish, white AS binders.



Description	One binder
AS price	£5.99
Order code	AS108
Description	Two binders
AS price	£9.99
Order code	AS109

Scala^{MM}400

The latest incarnation of what is probably the world's best multimedia presentation and information display program is upon us. Gary Whiteley plugs in and checks it out.

Unless you've been taking part in isolation tank experiments, you haven't got an Amiga, or you've never read any Amiga magazines, then you have almost certainly heard of Scala MM, the multi-purpose, multimedia, multi-talented software which originates from that land of snow, ice and fjords – Norway.

Back in 1987, when John Bohmer founded Scala Inc., there was little in the way of true multimedia software on any computer, never mind the Amiga. The invention of the Amiga must have been a dream come true for this would-be multimedia mogul, because with its custom graphics chips, flexible Operating System and built-in video and sound capabilities it offered the perfect platform for developing what was to become, over the space of a few short years, one of the powerhouses of presentation, information and interactive display software.

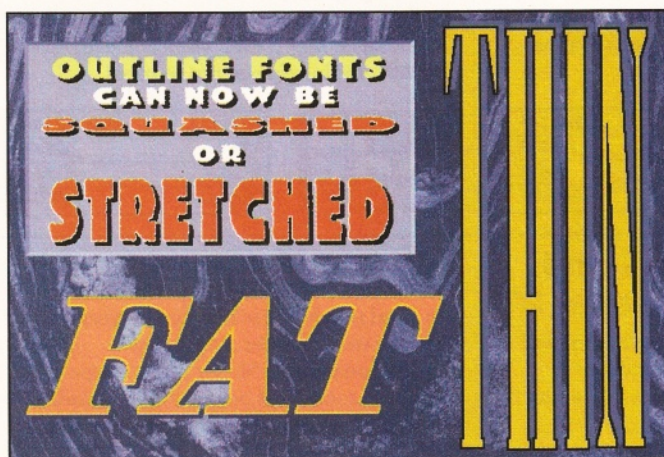
Now, with a range of products behind it suited to many tastes and pockets, Scala has released Scala MM400, the successor to MM300, MM200 and the original Scala software. As with all their upgrade releases,

What is Scala MM?

In a nutshell, Scala MM is a versatile multimedia presentation and information display program which has the ability to produce pages of mixed text and graphics, each of which can be provided with a variety of transitions, links to animation playback, synchronised sound (internal and MIDI), accurate timing, manual or automatic control, and many other features.

By using custom control modules (EXes), a range of external devices including laser discs and video decks, certain genlocks (including G2, GVP G-Lock and Neptun models), CDTV and CD³² players and (as of MM400) MacroSystem's VLab and Electronic Design's FrameMachine framegrabbers can be controlled directly from Scala MM.

Scala MM is used by many international companies to provide interactive, training and business presentations, educational quizzes, point-of-sale booths, cable TV displays, information displays, video titling and much more. Major users include IBM (I), SAS, Escom and German railways, as well as hospitals, hotels and airports.



MM400 has ScalaType, a new font engine for even faster access to CG and Outline fonts with some great new features.

MM400 has enabled Scala to add more features to both improve and extend the power of Scala.

What's new?

Without a shadow of doubt the best addition to MM400 is the new ScalaType font engine which dramatically decreases Outline font (also known as CG, or Compugraphic font) access and rendering times. Prior to ScalaType, calling up and displaying an outline font could take a moment or two – now it's almost instant! Meaning that if you want to preview a font, or change your text on the fly, you no longer have to wait those precious seconds while your Amiga grinds away and Scala constructs the text. Just change the font and it's done.

A further benefit is that MM400 takes much less time to start up than it previously used to take MM300 to get going and initialise its font list, so you can be up and working faster after a reboot or startup if time is a critical factor to you.

Another attraction of ScalaType is that CGFont text can now be stretched or squashed, either directly with the mouse, or numerically via the Layout Editor, so you're no longer restricted to text with a fixed aspect ratio. If you want tall, thin text, you can now have it. Dragging text out with the mouse is quick, easy and makes for much improved layout speed.

To complement ScalaType, a fifth level of antialiasing has been added especially for smoothing the edges of outline fonts. At the same time, the way that the antialiasing colour is set has changed (it used to be done from

Requirements

Scala MM400 requires at least 3Mb RAM (including 1Mb chip RAM) and a hard drive. 2Mb chip RAM, a Fast Amiga (68030, or better) and more Fast RAM are recommended, as is AmigaDOS 3 or later. More screen colours will be available on AGA Amigas than on ECS or other models.

Scala's Palette Editor and affected all the text on the page) to use the Background Colour button, which means that any text can be antialiased to a different colour if so desired. These changes have certainly improved Scala's antialiasing capabilities by producing noticeably smoother text, but at the cost of a slow-down during presentation playback.

While we're on the subject of text, one thing I've often wished Scala had was kerning control, so that letters such as T and e and W and A could sit next to each other more snugly, instead of just looking awkward. My wish has been granted, but I soon discovered that not all CG or Outline fonts are created equal, so many of the PD ones I tried wouldn't actually kern.

On the other hand, all my commercial Compugraphic fonts worked fine, though I couldn't tell you why there's such a difference in performance. But don't get too ecstatic – kerning only works with CGFonts, not ordinary Amiga bitmap fonts, and it doesn't always seem to work consistently, even on those fonts which are kernable.

Another valuable addition is a new set of EX modules which provide for the import (and sometimes export) of several different graphics formats, including GIF, TIFF, BMP, PCX and FLC files, as well as any graphics supported by WB3 Datatypes. MacroSystem's YUVN framegrabber format, RGB8, IFF DEEP and several other image formats are also accessible through the new Multi EX.

A small number of new transitions (curved fly-ons) have been added to give more spice to moving text and brushes on and off screen, but there are no other apparent improvements as far as transitions go.

Shuffle your choice

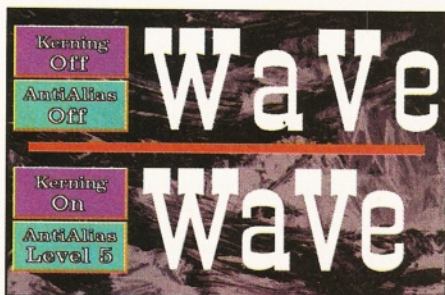
To make choosing background images, brushes and animations easier, the standard file requester can now be toggled to a File Shuffler, similar to the Shuffler available for editing the order of events. When the File Shuffler is turned on, thumbnail versions of each image in a directory are displayed, making choices easier if you aren't good at remembering what you called your required images. The File Shuffler works in either black-and-white, or colour and the thumbnails can be saved to speed up access the next time you search that directory. So now all you need to do to choose an image is to simply double-click on its thumbnail.

More EXes have been added to control more external hardware, including VLab and FrameMachine framegrabbers (so that you can grab backgrounds direct from video!), the Neptun genlock, MPEG video (requires additional hardware) and CD³² audio.

Finally, it is now possible to save rectangular sections of a Scala page as a brush, complete with all text and other associated graphics. These can be loaded into a paint program, or back into Scala. And if for any reason you need to save any Scala text to disc or for print-out, there's now an option to save it as an ASCII file.

Any problems?

Apart from the kerning peculiarities, I also experienced some problems when running MM400 on a WB2.1 Amiga 2000. The most infuriating trouble was that I couldn't use any of the new image EXes successfully. Try as I might, GIFs, TIFFs and other images were rejected by MM400 with error messages reporting variously that there wasn't enough chip or Fast RAM – both patently absurd as the 2000 had almost



With the new kerning feature and another antialiasing level, MM400 can provide impressive displays.

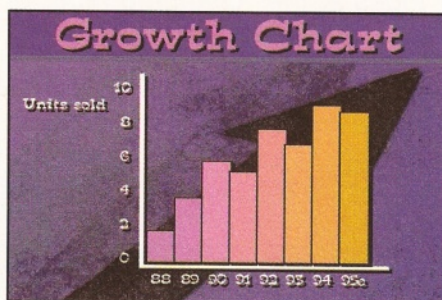
The times they are a changing

Once there was nothing to touch the Amiga as a cost-effective multimedia and video platform, but whilst Commodore sat back on its laurels and made goof after goof the massed ranks of the PC and its clones crept ever nearer the castle walls. Now, with the latest liquidation troubles still in everyone's minds Scala have bitten the bullet and are very close to releasing their multimedia software for (shock, horror) the PC!

This is good news for PC owners, who desperately need an affordable (and usable) program like MM400 on their platform, instead of the pitiful efforts I've seen over the years. Let's hope that they remember where it started

out, and that without computers like the Amiga to kick the PC market in the pants PC owners might still be running dull little DOS boxes which would never have stood a hope in hell of even multitasking, never mind running multimedia programs like Scala.

Of course a PC version of Scala must be good news for the Amiga too, since the PC market is so huge that Scala Inc must surely make enough money to be able to keep developing for the Amiga side, at least until (or if) the Amiga ever looks like becoming completely extinct. Time will tell, but until then let's hope Scala does as well on the PC as it has on the Amiga!



Animated charts are just one of the many uses to which MM400 can be put. All you need is some imagination...

2Mb of chip RAM and 7Mb of Fast RAM free during testing.

The only GIF images which would load were two-colour ones. Mostly though, Scala tried unsuccessfully to load the images, showed a couple of yellow (recoverable) Guru message and then closed itself down, keeping the memory and forcing a reboot before I could start Scala up again.

Further problems appeared when I tried loading IFF24 and IFF256 images into MM400. Once more, I was informed that the 2000 was out of memory – when it obviously wasn't! Just to check, I ran Scala MM300 and the images which I was trying to load into MM400 loaded and converted perfectly with MM300. So I guess something got broken between MM300 and MM400.

One more niggle – when antialiasing is on, any underlined text affected loses its underline. Surely this must be an unsquashed bug? Although I reported these problems to Scala



Can't remember what your picture was called? No problem, use the new File Shuffler menu to choose your image from a set of miniatures.

Tech Support, they weren't able to provide a cause or solution before I had to file this review, so no conclusions yet, I'm afraid.

The bottom line

Even with its little quirks, MM400 is another positive step forward for Scala's meisterwork. The new type features (faster fonts, kerning and antialiasing) and EXes, as well as the other improvements, are all welcome additions.

However, it seems to me that a little more time could have been spent testing MM400 on non-WB3 Amigas, particularly since A4000s are hellishly hard to get and many folks are still more than happy to continue with their souped-up 2000s and 3000s anyway. I still wish they'd added cut-and-paste for text and graphics and an Undo button, though! Maybe in MM500?

Also, don't forget to check out the interview with Scala Inc. on page 30. Gary Whiteley can be E-mailed at drgaz@cix.compulink.co.uk. ■

Scala MM400 features

- 100 page transitions
- 80 text transitions
- CG and Amiga font support
- 5 antialiasing levels
- Kerning and font scaling
- Full overscan and AGA support
- Loads IFF, GIF, TIFF and other image formats
- Animation, sound and MIDI control
- Brush load, save and scaling
- Absolute or relative timing
- External hardware control via EXes
- AnimLab animation utility
- ARexx support
- Range of backgrounds, fonts and symbols supplied

Scala MM400

MM400 doesn't seem quite as stable as previous releases (which may reflect the pressure on Scala to produce a PC version), but the new features make it a worthwhile upgrade for current Scala MM owners and a bargain for professional multimedia presenters who still have faith in the Amiga's future.

Price: £299.00

Upgrade: from MM300 £49
from MM200 £99

Supplier: Scala UK Ltd

Contact: 01920 444924

Verdict: 89%

The Silicon chameleon

When is an Amiga not an Amiga? When it's a PC, a Mac, a C64, an Atari ST, a Spectrum... or a different Amiga even. **David Taylor** looks at the "changing face" of the Amiga.

Other computers may have trouble emulating the Amiga because of its custom chips, but our computer can shed its skin and become something else at the drop of a diskette. In recent times the Amiga has seen a huge increase in the number of emulators available for it. Some of the programs are now commercial releases, others could be yours for the cost of a disk and one may even be present on your Amiga already. Interested?

PC-Task 3.10

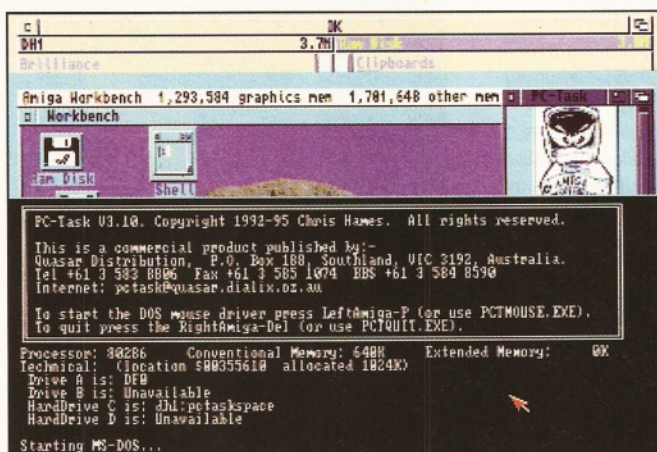
It's a sad fact of life that PCs *do* exist and, worse yet, that most of us have to come into contact with them every so often. It's all very well to have your Amiga at home, but you may find yourself wanting to make use of a PC program you are used to at work, or perhaps finish off something you'd been doing at work.

Whatever the reason, it's an interesting idea to run PC software on an Amiga. PC-Task is designed to do exactly this.

Installation is a breeze using the standard installer. The program can be run from both floppy and hard drive and so can be installed to either. There are different versions of the program optimised for use with different processors and even a turbo version of each for those with more RAM.

The minimum requirements for PC-Task are remarkably small. You could run it on a 1.2

"With everything set up, it's just a case of getting used to the PC's OS and **loading** your programs."



PC-Task 3 running happily on an un-accelerated A1200 with Workbench and Directory Opus multi-tasking easily in the background. Do that on a '286, if you can!

machine even. For better results, 2.1 and above is recommended. Obviously, the better the machine, the better the performance of PC-Task.

Although I did use it on an A1500 from floppy, I found it more comfortable on an A1200 with a hard drive. It is the hard drive that makes the main difference. When you start PC-Task as a floppy-based program, you need to insert a system-disk created on a real PC.

To do this, you must format a disk on a PC, using a command like "format A: /s /f:720". Here is where you remember that PC-Task emulates the PC's hardware; it doesn't have the software OS, MS-DOS. So, you need a separate version of MS-DOS for use with PC-Task. As you can imagine, running an emulator with an OS on floppy is not ideal.

The solution is to create a hard disk file on a hard drive. This is a pseudo hard drive partition that PC-Task can use. The program creates a file of the appropriate size on your hard drive and you simply need to specify that the program should use this file as a hard drive partition in your preferences. It is also possible to support real PC partitions, but creating a new PC partition would be a difficult job, especially if you already have the drive partitioned.

That option also seems a little extreme as I found no problems with using the pseudo-drive. You can have two drives, C: and D: and if you format the C: 'drive' as a system-disk, PC-Task will now boot using this and start DOS. (Note that you will still need MS-DOS.)

This version of PC-Task can run software that requires a 286 processor or lower, which

means Windows on the Amiga is possible; but, considering how slow it is on a real PC, probably isn't advisable.

The restrictions of PC-Task are inevitable. This is a software emulator and you can't expect to be rivaling a '486 with an old A500. This isn't to say that PCs are better than Amigas; I'd like to see an old 286 PC emulating an Amiga (oh, the Pentium PCs can't even do that) whilst it's multi-tasking and doing something else in the background. This is one of the strengths of PC-Task; it still multi-tasks, which means you can switch back to the Amiga as with any other application.

With everything set up, it's just a case of getting used to the PC's OS and loading your programs. If you are making use of PC

The hard way

All the products mentioned here are software emulators. As such, you can't expect to get programs running very fast and may even find some programs refuse to run. While the results should be acceptable to the non-professional, don't expect to be running Quark from a software emulator.

Professionals may wish to explore the other avenue of hardware emulators, such as the Golden Gate '486 board (reviewed in AS21) or the Emplant board (reviewed in AS28). These boards plug into box-Amigas and attain far better results because they actually contain the hardware for those computers. The Emplant board can even be fitted with Mac ROMs.

shareware, I had no trouble using PkZip and unzipping PC archives within PC-Task.

In addition to the program, there are a couple of PC utilities supplied. These are designed to make the integration of the PC into the Amiga easier. They allow you to do things like copy programs stored in the PC hard disk file to an Amiga device, or to view the contents of an Amiga directory within the PC environment.

PC-Task is remarkably easy to start and use. Most of the problems come from trying to get around in such a lame OS as MS-DOS and you can't blame the program for that. Of course, it's a shame that only '286 and lower programs will work, but nobody can work miracles even on an Amiga. PC-Task does exactly what it says it does and although I'm sure you may find the odd program that it doesn't like, I didn't come across one.

As far as PC-Task 2 users are concerned, the new version will make use of any hard drive files you already use. Although it is a lot more commercially presented than earlier versions, it offers little to entice you to upgrade. There is now support for the SVGA mode and there are more versions of the program so that you can use one that matches your configuration. I would say that only those people who make extensive use of PC-Task will want to consider upgrading, but people who run that amount of PC software will probably already have a PC anyway.

I wouldn't hesitate to recommend PC-Task 3 to those who were unsure about buying an earlier version, because it is a remarkable piece of software and should amaze those friends of yours who are wetting themselves about finally getting multi-tasking on their PC.

Incidentally, the version I reviewed here is 3.10, which has several bug fixes from 3.0. If you have 3.0, a patch is available and can be found on Aminet in misc/emu or from PD houses.

PC-Task 3.10

Price: £59.95

Supplier: Emerald Creative Tech

Contact: 0181 715 8866

Verdict: 90%



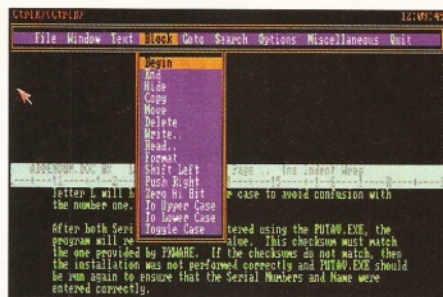
Star buy

ShapeShifter 2

This is a Mac II emulator that is actually shareware. The unregistered version only allows floppy disks to be used. In theory, this program works very much like PC-Task, in that you can use filedisks on an Amiga partition as a pseudo-Mac hard drive and that you will require the Mac system-disks to boot the emulator.

The big difference is that this program requires you to read the ROMs of a real Mac to get it to work. The ROM image can then be put on to the Amiga and everything should work fine (N.B. from then on the real Mac and the emulated Mac must not be run at the same time).

Unfortunately, things are never that simple. Not all Mac ROMs will do (they must be version 124 512K, or 1Mb ROMs) and despite trying several Macs, none of the ROMs translated correctly. Although this problem seems to arise from the Mac side of things, it does make it



Running DOS-based applications is more comfortable than Windows... and faster.

rather hard to say how it performs! However, I've heard from people who use the program and think it's the best thing they've ever seen.

This is where the advantage of shareware really comes into its own. If you've got a Mac and you want to emulate it, then you can get the unregistered version from a PD house and see if it will do what you want, before you have to buy the full version. N.B. Requires an '020 or above.

ShapeShifter 2

Price: \$40/DM50 (approx. £25)

Supplier: Christian Bauer

Contact: cbauer@mzdmza.zdv.uni-mainz.de

Verdict: n/a

The Whole Spectrum

Aside from the two main rival platforms, there are also emulators for all sorts of computers. These emulators can be found in the Public Domain and some require ROM images, like ShapeShifter, whilst others work independently.

Amongst the emulators tested were ones of Vic 20s, C64s, QLs, GameBoys, BBCs and

Spectrum. It is amazing how easy it is to get these programs running and I soon found myself trying to reconstruct from memory the listing for a Battleship game I once wrote for the Spectrum, until I started to wonder why.

As a piece of nostalgia, these programs are fine and it was interesting to see how things have progressed from the days of Spectrum BASIC. Their practical use is limited to playing your favourite old game that you haven't seen for years. Still, since you can obtain them from PD libraries, it isn't going to break the bank having a bit of a trip down computer memory-lane.

And now for something completely different...

This is quite an amusing aspect of the Amiga emulation scene, where you can make your Amiga pretend to be a different type of Amiga.

When Workbench 2 came along, programmers were forced to clean up their act and write programs that were system "legal". This meant, however, that new users often found that older programs wouldn't run on the new system. To rectify this, several programs emerged, like The Boot Utility or Degradar, that would downgrade the system to allow older programs to run. Any PD library should be able to supply you with some of these sorts of program.

The growth in the CD-market has seen folks with AGA-machines wanting CD³² emulation. Two commercial releases that do this are:

CDBoot

CDBoot uses the standard installer and can be run from floppy or hard drive. In terms of ease-of-use, this program is unrivalled. It really is just a case of click-and-go. Once it is installed, you

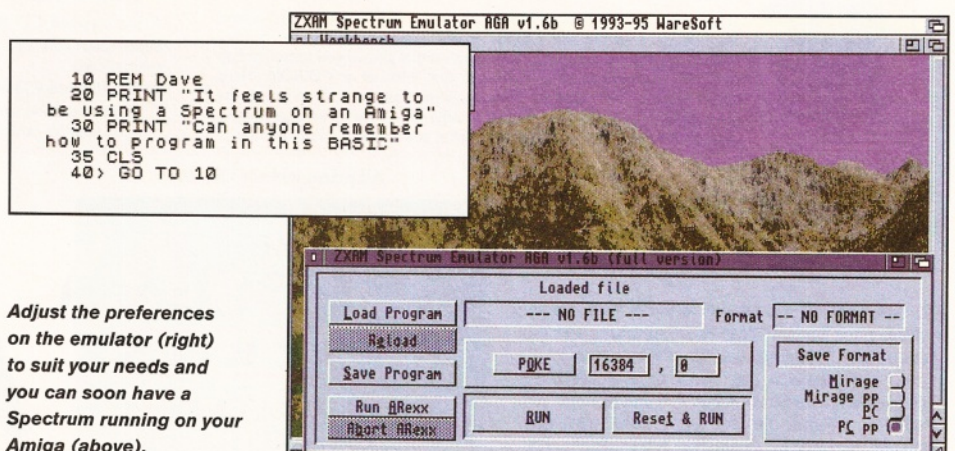
Legal issues

If you do start using emulators, you must be aware of legal issues that arise from the use of them.

In the case of emulators that take snapshots of the ROMs, it is not legal to then use both machines at the same time. If you have, say, a Mac at the office and want to do some work at home on your Amiga, you should check out the licensing agreement, especially if you don't own the hardware you

use at work (i.e. if you don't work for yourself).

The same holds true for the software you run on the emulator. You should check out the individual licence for each program. Some programs have an agreement which allows the use of one piece of software both at work and at home on the assumption that they won't be used at the same time. Again, if you don't own the software, you must also get permission from the licensees (i.e. your employers).



Adjust the preferences on the emulator (right) to suit your needs and you can soon have a Spectrum running on your Amiga (above).



Double Dealing from HiSoft!

Exclusive Hot News

Following a lengthy investigation, we have discovered irrefutable evidence that Amiga publisher HiSoft is engaged in double-dealing. Although the company is known for top-selling titles such as Devpac 3, Megalosound and Squirrel SCSI, it now seems that HiSoft is prepared to offer a number of these professional packages bundled together at prices that can only be described as suspicious.

Our reporter gained an exclusive interview with David Link, of HiSoft, who made this outrageous claim: "We have been supporting the Amiga community for 10 years now with a range of software and hardware packages. As a thank you to all the loyal supporters of this amazing computer, we decided to make some very special 'birthday' offers to readers of this magazine." Double-talk? We'll leave you, the reader, to judge ...

Termite

88% Amiga Computing
95% AUI 88% CU Amiga

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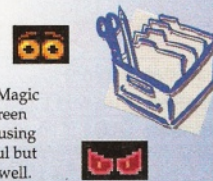
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This is the utility that you simply must own! Maxon Magic is a fantastic combination of 20 different animated screen savers, a system event sound manager and many amusing sampled sounds that will not only be incredibly useful but will give you and your friends endless enjoyment as well.

Squirrel Storage Systems



Amiga Format 93% CU Amiga 94% Amiga Shopper 95%

As you can see, the Amiga press has gone nuts over our new Squirrel SCSI interface for the A600/A1200. In case you've missed these reviews, the Squirrel SCSI is a plug-and-play add-on that allows you to connect up to 7 SCSI peripherals to your Amiga. Just think of it, CD-ROM, Hard drive, Scanner, DAT, Optical, SyQuest, Tape Streamer - all on line at the same time! No wonder we named it after that famous storage-hungry animal! To go with Squirrel, we have some great value devices...

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DOSing around

The Amiga is original in that by adding only a few files to the L: directory and the DOSDrivers drawer, it can read different disk formats. Nowadays the Amiga can read double-density PC-disks as standard on Workbench, but these software drivers can be upgraded easily. Adding this support to Workbench is easy and needn't cost the Earth.

Cross-DOS

Since Workbench 2.1, the program Cross-DOS has been part of Workbench. This program allows you to copy data on to and from PC-disks. You can format drives as PC-disks and, by using such programs as Apple File Exchange, even transfer data on to Apple Macs. Of course, this is the limit of this program – you cannot run any program that isn't an Amiga program, but it *does* mean you can move text and image files around and you'd be amazed at how useful this is.

If, for instance, you write a file at home on your trusty Amiga, but want to output it at work, you can save it as an ASCII file and put it on to a PC-disk. Filename restrictions that are caused by MS-DOS still apply, meaning your names must be only eight characters long and can have an extension of three characters (e.g. amigadoc.txt).

Cross-DOS is available as a separate

package. Although most people who have it automatically will be Workbench 3 users, it only requires Workbench 2 and you can easily install it on to either floppy or hard drive. Now in version 6, this update is supposed to be faster at reading and writing to PC-disks. The Workbench bundled version is a crippled version which is almost equal to Cross-DOS 5.

The commercial package can even access MS-DOS formatted hard drives, both real and simulated partitions. Real partitions are true MS-DOS formatted drives, while simulated ones are files on an Amiga volume that are pseudo MS-DOS partitions.

Price: £49.95 (phone for upgrade prices)

Supplier: HiSoft

Contact: 01525 718181

Verdict: 80%

While the commercial Cross-DOS is the best known PC-disk reader for the Amiga, there are actually some PD and Shareware products that can read PC floppy disks. Two of the best are MSH and MultiDOS. I personally found MultiDOS the easier to use, but both should be available from PD libraries for you to try out. Both these products are quite old, which means that Cross-DOS 6 should outperform them in terms of speed and flexibility. For the

occasional user though, they are definitely worth investigating.

Cross-Mac

If you are mainly interested in converting files from the Mac to the Amiga, then Cross-DOS and the like might not be the best programs. The makers of Cross-DOS also produce Cross-Mac, which will allow you to read Mac-disks.

To use it you either require a HD drive or an Amax cartridge with a Mac 800K drive or an Amax II plus/Amax IV card. As with Cross-DOS, hard drives are also supported. The advantage with Cross-Mac is the fact that you can read Mac HFS-disks and CDs. Also, although you can use Apple File exchange and place things on a PC-disk to be read on the Amiga, this is not ideal as it means the data is going through two filters. With large files, you can often get data corrupted, as has often happened to me. It's simply a question of tools for the job.

If it were the same price as Cross-DOS, I'd leap at it, despite the hardware restrictions. At this price, I can see people muddling through with the PC version, even though it's not ideal.

Price: £99.95

Supplier: HiSoft

Contact: 01525 718181

Verdict: 70%

39 ▶ can simply slap a CD in the drive and boot it up. Although most of the changes are superficial ones that CDBoot makes to the startup-sequence, this program does add quite a few things, such as CD³² controller emulation.

Because of its ease-of-use and stability, this is a very tempting product. It seems that you don't get *that* much for £25, but it does exactly what it says it does.

CDBoot

Price: £24.99

Supplier: PD Soft

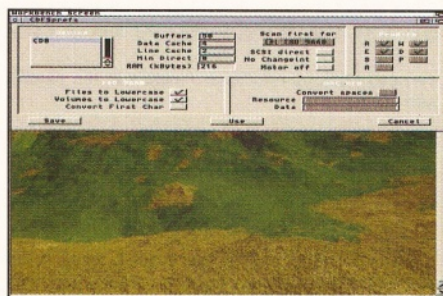
Contact: 01702 466933

Verdict: 78%

Cache CDFS 2

This program is a whole update for CD drives and contains much more than just CD³² emulation, which is a good thing. The CD³² emulation doesn't seem as stable as CDBoot.

The program is installed easily enough and, like CDBoot, can be put on to a hard disk, or used to create a self-booting floppy from which the CD drive will boot. When it boots, though, a



Cache CDFS 2 has a standard preferences interface that makes it easy to configure.

preferences screen appears from which you can fiddle around. While this means that you can alter settings and choose whether you should emulate the controller or not, it also means that you have to try various settings before you can get some CD³² software to run. Even then, I found that it sometimes crashed.

In addition to the CD³² emulation, this program allows you to read Mac CD-ROMs. Most CDs use a standard filesystem which means that any computer can read the data on the disc, even if it can't use it. So a JPEG on a

CD-ROM could be read on an Amiga, a PC or a Mac. The Mac, however, has a system known as HFS, which will only be visible to Mac computers. Should you try and examine the files on an Amiga, the CD will appear bare. Cache CDFS has a preferences screen on Workbench that allows you to attempt to scan for these files.

Hey presto! A set of files suddenly appears. As you can see, it is possible to obtain data from these discs now as well. Obviously, as with Cross-DOS, this does not enable you to run Mac programs, only to transfer data.

All in all, Cache CDFS is a mixed bag. The CD³² emulator is a little bit of a let-down (don't get me wrong, I did sit and play away at The Guardian on an A4000, so it *does* work), which perhaps is because it's too complicated. The ability to read Mac-CDs is a boon for serious users, though, and really goes to completing the Amiga's cross platform abilities. ■

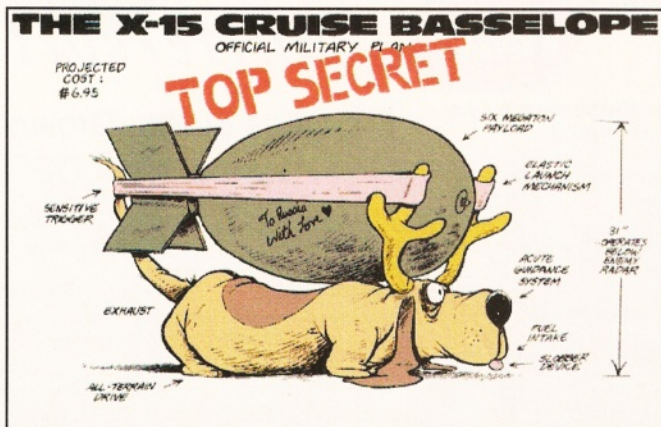
Cache CDFS 2

Price: 89 DM (approx £30)

Supplier: Hirsch & Wolf OHG

Contact: 0049 2631 833990

Verdict: 78%



When using Cache CDFS 2, it was possible to retrieve and use files like this from Mac HFS CDs which normally cannot be accessed on the Amiga.

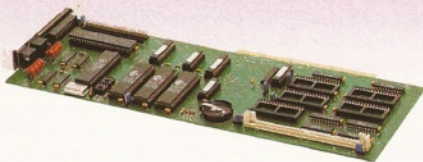
HD drives

Both PCs and Macs actually have one advantage over the majority of Amigas (A4000s excepted) in that they have high-density drives fitted as standard. The Amiga drive is a double-sided drive, which can be annoying since most PC and Mac software comes on 1.44Mb high-density disks. In the case of MS-DOS, you can return your high-density disks and ask for them to be replaced with double-density ones. If, however, you are intending to do a lot of file-swapping and emulation, then it's probably a good idea to invest in a high-density drive for your Amiga.

EMPLANT

£586DXsm Emulation Module

The new E586DX emulation module offers a high speed 586DX (FPU, MMU, and new instruction set) emulation with complete low-level architecture support, giving you the ability to run DOS, OS/2, NT, Windows 3.x, and even Chicago! There is support for MDA, CGA, EGA, VGA, SVGA video modes (dependant on hardware, AGA or a supported graphics card is required for VGA/SVGA), sound, joysticks, floppy drives, hard drives, extended memory, and more! Requires PC BIOS, not supplied.



Macintosh® Emulation Module

The Macintosh emulation module is a 'generic' Macintosh with the speed of the emulation depending on the processor your Amiga is using. An A3000 is equivalent to a MAC IIci. An A4000 is equivalent to a Quadra 900. Support for up to 16 colours is provided for non-AGA machines. A4000 owners can use a full 256 colours! Up to 24 bit (16 million+) colours is supported using third party video boards. Built in multiple file transfer allows for quick and easy transfers between the Amiga and MAC emulation. Support for AmigaDOS devices, Scanners, CD ROM, MIDI, SyQuest removable drives, Printers, Modems etc. Full stereo sound is supported too! Requires Macintosh ROMs (not supplied).

The possibilities with a multi-platform machine are endless. Now you can take advantage of a whole host of great software previously unavailable, and use them to compliment each other. By upgrading your Amiga (extra memory, faster processor, etc) you instantly upgrade your emulation too! All major graphics cards are supported for improved video performance such as: CyberGraphics, Picasso II, EGS-Spectrum, Vivid-24, Rainbow II, Rainbow III, Visiona Paint, Merlin, Retina, Retina Z3, Piccolo, PiccoloSD64, EGS110/24, and OpalVision!

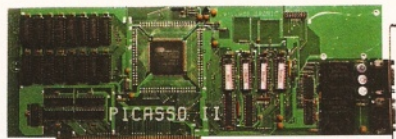
Blittersoft are the exclusive European distributors for Utilities Unlimited, providing full technical support/upgrade/warranty services All emulations require a 68020 or better.

EMPLANT BASIC	£239.95
EMPLANT OPTION A (AppleTalk ports)	£269.95
EMPLANT OPTION B (SCSI)	£269.95
EMPLANT DELUXE	£299.95
£586DX sm MODULE	£ 99.95

New Pricing!

PICASSO II

PICASSO II is the leading graphics card on the Amiga. It offers unrivalled support and retargetable graphics on any Zorro based Amiga. Workbench emulation offers 256 colours, even on non-AGA machines (Requires OS3.1) at resolutions up to 1600x1280. Supports HiColour (16 bit) and True Colour (24 bit) graphics - 16 million colours!



There is no longer a Chip RAM limitation and screen configuration is provided through PicassoMode, which allows the creation of custom screens quickly and simply.

PABLO is the new Video Encoder option for Picasso II, expanding it with two additional video ports, one standard Composite Sync Signal, and one S-VHS (Y-C) compatible port. All PAL compatible video devices can be plugged into Pablo, such as a colour TV or a video recorder. Pablo has 15KHz overload protection and is supplied with cables/adapters, Animation examples and a 24 bit animation player.

PICASSO II 2MB	£299.95
PABLO VIDEO ENCODER	£129.95

DOUBLER 4000 - 50MHz

Blittersoft deliver the fastest 68040 accelerator ever for the Amiga 4000/040, setting a new breakthrough in price and performance. The new Doubler 4000 50 MHz 68040 accelerator delivers across-the-board speed increases for all applications and system functions, translating into a significant productivity gain.

This powerful "plug and play" accelerator is 100% hardware and software compatible, since it still uses a Motorola 68040 processor. It offers an affordable upgrade that makes sense, requiring no special software. For a moderate price, users get twice the processing power, yet retain 100% of their Amiga investment. No software upgrading, reconfiguration or incompatibilities.

The Doubler 4000 accelerator is an easy-to-install daughter board that simply replaces the 25 MHz 68040 CPU socket on the Commodore Amiga 3640 board. Anyone who can install a SIMM can install the Doubler 4000. Customers are supplied with photo-illustrated installation instructions plus the necessary extraction tool to perform the installation.

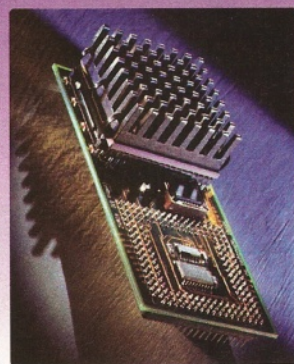
Simply putting a faster processor into an Amiga does not help much unless the system can supply enough data to keep it busy. That is why the Motorola 68040 contains a large on-chip cache. This cache frees the Doubler 4000 to work semi-independently of the Amiga memory subsystem. In fact, 85% of the time the cache contains the data and instructions necessary for the Doubler 4000 to operate at full speed.

The Doubler 4000 includes an on-chip math co-processor, and will dramatically speed up any application - such as rendering - that depends on calculations. It is completely reliable and system safe. An integral cooling system ensures that the Doubler 4000 runs cooler and more reliably at 50 MHz than the original processor.

RELATIVE PERFORMANCE (SysInfo V3.15 benchmarks.)

DHRYSTONES	-	A4000/40	: 17,973	DOUBLER 4000 :	36,126
CPU MIPS	-	A4000/40	: 18.76	DOUBLER 4000 :	37.72
DISK MBYTES/SEC	-	A4000/40	: 1.40	DOUBLER 4000 :	1.58

DOUBLER 4000 50MHz ACCELERATOR £399.95



ARIADNE

Ever wanted to set up a network but been afraid of the complexity involved? Now there is a simple but effective solution for any Zorro based Amiga. In addition, Ariadne has two extra parallel ports and includes Commodore industry standard software solution ENVOY. Ariadne offers 10Base-2 (Thin ethernet, coax cable) and 10Base-T (Twisted pair, western jacket), Socket for a boot ROM, SANA-II compatible driver for ethernet and parallel port, 32Kb cache to support the CPU and full manuals.

You can hook up additional Amiga's to the parallel ports with Liana.

ARIADNE £219.95

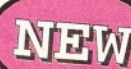
LIANA

Liana is the ideal solution for a quick, easy yet efficient connection between two Amiga's. Simply plug the special cable into the parallel port, install the software and you are ready to go. Now you can share hard drives etc. without on a small budget. The software supplied is ENVOY.

LIANA £64.95

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OS 3.1



All packs contain the appropriate ROM(s), Workbench 3.1 disks, three manuals and detailed fitting instructions (*).

Much of the latest software requires the latest operating system. Now you can upgrade to KickStart 3.1 for virtually any Amiga. Non-AGA machines can deliver a 256 colour Workbench with OS3.1 and Picasso II.

OS3.1 FOR AMIGA 500 OR 2000	£89.95
OS3.1 FOR AMIGA 600, 1200, 3000 OR 4000	£99.95

* Please specify machine. Note that revision 3-5 motherboards require linking to be added. We strongly recommend that a professional computer repair/service company undertake fitting. We cannot exchange any damaged or incorrectly fitted components.



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Organiser

Keep forgetting gran's birthday? Omitted to get your work done? Need a diary, but can't stand Filofaxes? **David Taylor** thinks he's found the answer.

This package landed on my desk and to say I was dubious would be an understatement. Now I'm as forgetful as the next person, so much so that I've had to get an electronic organiser so it can remind me of what I'm supposed to be doing, but... Where was I? Oh, yes, forgetfulness (cue canned laughter). Still, a full priced organiser program seemed a bit much. So, I'm going to be completely honest...

Wow! There are plenty of PD and shareware reminder utilities and some of them are excellent, but the quality of Digita's offering simply outstrips them. It has the usual look that Digita's programs have adopted, so Wordworth users will know what to expect. I haven't even had to look at the manual or on-line help, the whole program is so intuitive and easy to use.

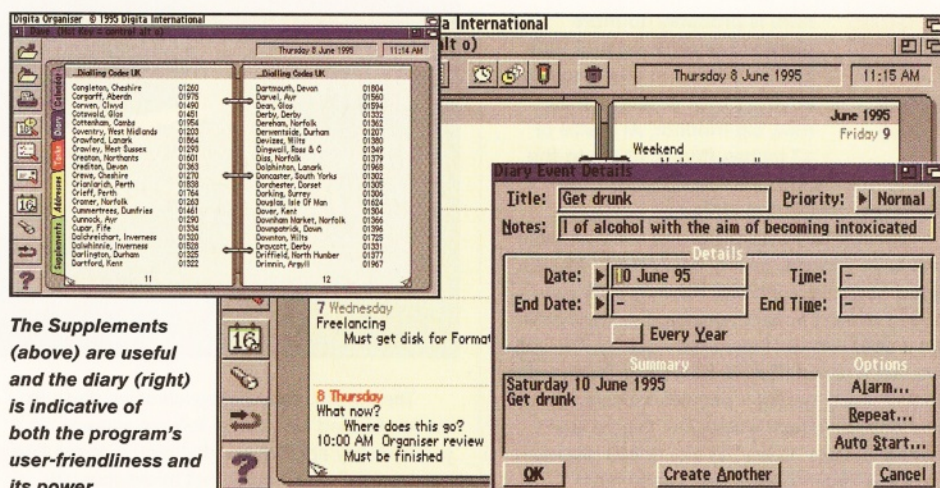
The best thing is to probably go through the features in the order they are sorted within the virtual Filofax that makes up Organiser. The first part is a simple calendar with four months displayed on the screen. You can flick through the months and then, if you click on a particular day, you will skip to that date in the diary area. This simple cross-referencing is one of the little touches that sets Organiser apart.

The diary couldn't be simpler to use. Simply click on the day and a window pops up in which you can enter the title of the event, together with the notes on it, and then enter a time for the alarm function if you want. Or, you can use this alarm feature to launch programs. This can be made to be a rather useful feature. Think about it, how about launching a virus checker every week so that you don't forget to scan your disk?

Each entry can be given a priority from low to highest and the diary has four different view modes, so you aren't limited to a small space to view your entries. The views range from at-a-glance, to page-per-day.

See for yourself

You want to know more, but would like to try before you buy? Last month's Coverdisk 1 had a demo of Organiser on it, so if you'd like to test it before you buy, here's your chance. If you don't have last month's issue, back issues are available - see page 104.



The Supplements (above) are useful and the diary (right) is indicative of both the program's user-friendliness and its power.

There are also some themes for the diary pages which will allow you to have certain days marked. 1995 themes include horse racing, astronomy, celebrity birthdays (eh?) and historical days.

The next area is for tasks, where you can enter your workload and assign priorities, which will sort your work for you so you know what to do next. And when you finish a task, you get to add a satisfying tick next to it!

There is a comprehensive address book set out in the usual A-Z way. As with everything else, entering the data is a doddle. If you have a database with addresses on already, then it might be possible to import it to here and save yourself some typing.

The last area is one called Supplements. These are like the little pieces of info you get in diaries or filofaxes. OK, some of them strike me as a bit weird, but what do I know? Maybe angling tips are of interest. Still, I've installed some of them, like the world time zones and the dialling codes. It's even possible to create your own, which is a bonus.

As if this weren't enough, Digita have really thought about how to polish the program. Forget the intelligent way that you don't have to enter end times, but you can say how long you want something to last for. Forget the nice icons that enable you to skip to areas. What about the way you can put a project icon in your WBStartup drawer so that Organiser will be started on boot up, either iconified or not? Nope, I'm not even going to mention it.

No, the real class comes from the searching utility, which allows you to find any data in all or any specified fields. So, finding a person is easy, whether it's for a meeting time or their address. It also means the supplements act like a sort of database and you can skip to a phone code easily. Add to that the print option, which can give you a hard copy of the day's event, a person's address, or your workload and I'm pressed to think of anything that's missing from this program.

Perhaps something like a calculator might be nice? Or maybe even a mini accounts package. I know that's really beyond the scope of this program, but having one integrated would be nice, automatically updating your finances on pay day. Maybe we'll see a version 2.

This type of program is only for people with hard drives, because booting this from floppy every day would be seriously daft. However, if you tend to forget things and want a digital Filofax, then this is the Rolls Royce. It can be picked up for less than the RRP of £40 if you turn to the AS mail order, which, considering the price of software, makes it reasonably priced. ■

Organiser

Price: £34.99 from AS

Supplier: AS mail order (page 34) or Digita International

Contact: AS Hotline 01225 822511
Digita Int. 01395 270273

Verdict: 90%

Star buy



Samsung SyncMaster 17GLsi

Nick Veitch *strives desperately to improve his images.*

There is probably no more pleasant experience (not that can be printed in this magazine anyway) than getting a nice, new, big monitor. At a size of 17 inches (that's 43 cm to the metric generation), the SyncMaster from Samsung certainly qualifies as being big.

But size isn't everything. The usual problem with large screens, on any computer, is that the flicker becomes apparent. You may think your screen doesn't flicker in standard screenmodes, but it *does* – it just flickers very quickly. You can see that a screen flickers by waving your hand in front of it very quickly – you will notice a vague stroboscopic effect, where your fingers aren't blurred, but are "frozen" in one or two places.

On a larger screen, this can be more apparent, simply due to the area of the screen, but it depends on the type of phosphor, the dot pitch of the screen (the size of individual phosphor dots) and the screenmode. I was pleased to find the picture on the SyncMaster being surprisingly steady, although flicker becomes more apparent than usual in the interlaced modes.

Clock that

The SyncMaster supports clock frequencies of 85kHz horizontal by 120kHz vertical, which gives you the possibility of a whopping 1280x1024 pixel screen, although you won't be able to see screens this size with a standard Amiga. It also supports VESA modes, for high resolution, non-interlaced displays, but, again, you will need some sort of display card, such as the Picasso, Rainbow, or Retina, to be able to get the best out of this monitor.



With a dot pitch of .28, the images on screen are sharp, very sharp.



The monitor does not synchronise down to the levels used by ordinary low-res screens, so if you have any applications that require lo-res (like most games) you'd better not throw your old monitor away. If you want to use this monitor on the standard Amiga output, you will need a D-type to VGA convertor (available from Silica and a load of other places) since the SyncMaster comes with a VGA lead.

You could, if you want, link it up to anything with an RGB and sync output, because, as well as the VGA connector, this monitor has five BNC connectors on the rear, for any standard RGB and separate or composite sync signals.

A distinguished panel

A pop-out panel on the front of the monitor will allow you to adjust most of the screen's operational parameters. Curiously, the contrast and brightness are still controlled by thumbwheels. Unfortunately, in common with almost all monitors these days, this model is compliant with various low-emission directives.

Basically, this means that even on full brightness, you won't be able to use this monitor as an alternative lighting source. I suppose it *also* means you won't contract any nasty skin complaints, but it's always nice to have the option.

The panel can be used to adjust screen size, offsets and compensate for the "pincushion effect" – the distortion of the image at the edges. There are also various controls for adjusting screen colours, so you can attempt to match your screen colour for colour output work.

An unfortunate habit when using the more unstable Amiga resolutions, is that the monitor occasionally loses the sync signal and you have

to wait around five seconds while it clicks away like a Cortina Mk3 indicator until it locks on again. This also happens when you change screenmodes, which is mildly annoying, but it's common to all true multisyncs.

With a dot pitch of .28, the images on screen are sharp, very sharp. The screen itself is coated with various substances to reduce glare and static, which seem to be effective, but you always need to leave them a few months to see just how effective they really are.

Conclusion

Although expensive, this monitor really *does* "do it all". It has enough posy buttons, strange controls (it has a Degauss button!) and weird connections to impress all your friends; it's very big and, most importantly, it produces a clear, sharp image at just about any high-res screen mode your Amiga can throw at it.

It would be ridiculous to spend this amount on a monitor if you don't already have some sort of 24-bit card – the Amiga can't make full use of this display without one. If you do have a card, but are using it with a sad, old monitor that can't support most of the modes, or even a 1960, which is good, but just a little too small for detailed work, you could buy worse. There are cheaper monitors on the market, though. ■

Samsung SyncMaster 17GLsi

Price: £699

Supplier: Samsung

Contact: 0181 391 0168

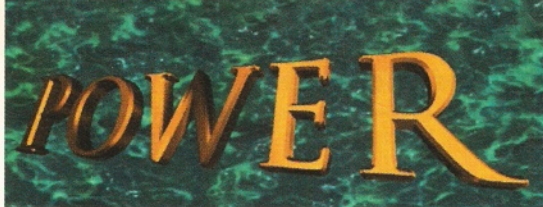
Verdict: 81%

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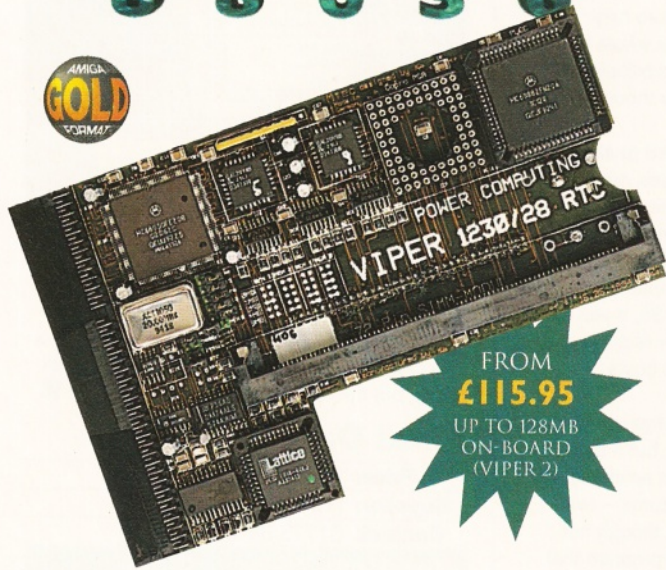
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Final Data 2

Hardly having time to catch our breath since the release of *Final Data*, SoftWood have already updated it to version 2. **David Taylor** looks at what's new.

This is one wacky database. It is still convinced that it's a spreadsheet. Since the first release (see AS49), SoftWood have added several new features. For those who haven't seen this program, it is a pretty powerful database that differs from its rivals in its approach.

The whole layout of the database is quite strictly controlled and resembles a spreadsheet much more than a standard database. That's not a criticism; there are no rules carved in stone saying what a database should look like.

As with all programs like this, you can set up and edit fields, containing most types of data, including calculations based on other fields. A RCalc type has been added, which makes calculations based on the previous column to enable you to create running totals for such things as accounts.

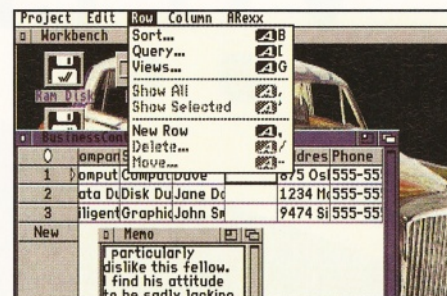
More importantly, a new memo field is now available, which allows you to enter a document that contains more words than can be fitted into a column. Although this adds some power, I

wish the mini document editor that pops up had an ASCII loader, so that you could import documents. As it is, you could be in for some typing. If this feature had been more fully developed, it would have added a whole new dimension to the database's possibilities, with document databases possible for those with adequate system specs.

A View feature is now included to allow the creation of sub-lists from databases, such as horror films from a movie database.

The last really major improvement (there are many minor changes) is the addition of a query feature. Better than the simple find, you can specify multiple parameters. So, if you had a car database, you could query for records of a blue Ford with H registration that costs £10,000 or more.

Final Data 2 is very easy to start using, even if you are not used to databases, but it can produce results that are less than aesthetic. The fact that it still cannot handle pictures – even IFFs would have been adequate, though not perfect – is the biggest flaw in a program that otherwise offers some original features. As an



Final Data 2 can be opened on Workbench as a Window, with databases forced to fit to size.

upgrade for £10, users of the first version get a new disk and manual addendum. It seems a bit pricey, but the additional features are useful. ■

Final Data 2

Price: £39.95

Supplier: Harwood Computers

Contact: 01773 836781

Verdict: 75%

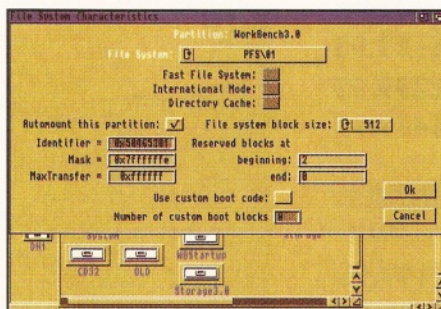
Ami-FileSafe

The Amiga has seen several filesystems, some official, some PD and now one that's a commercial release. **David Taylor** updates his hard drive.

The OFS (1.3 Amigas) is now fading in popularity and FFS (2.0+ Amigas) is being accepted as the norm on the Amiga. As FFS was an improvement in terms of capacity, so the new AFS offers more, but not just in terms of efficiency. AFS first came to life as PFS (Professional Filing System), a shareware product. It has now been refined and is now fully commercial.

The improvements this filesystem provides for floppy users are useful – you can get more on to your disks, but at this price it is really only going to be of interest to hard drive users. It can be installed on to rigid disk blocks using HDToolbox, but note that early versions of HDToolbox do not support such additions and you'll end up playing around with mountlists.

The big problem with installing new filesystems is that you'll have to back up your drive and reformat the partitions. AFS is going to have to offer quite a lot to encourage you to do this!



Ami-FileSafe is a boon for professionals and should be easy enough to set up in HDToolbox.

AFS stores files in a different way to the norm, setting aside a part of a partition for file structures instead of using headerblocks. This is much more efficient, especially if you store a large number of small files.

The real area of interest for users, though, is in the safety of AFS. It is impossible to invalidate an AFS volume, so if you crash your system when you're writing to it, you've got

nothing to worry about. With limitations only caused by your disk being so close to full that it's not possible, this even holds true when overwriting files. You will never again get a corrupt disk from this problem.

The safety this system offers must make it interesting for professional users who can't afford the time to recover data and repair disks. A little pricey perhaps, but you can decide for yourselves whether it's worth it by taking a look at the AS demo on this month's Coverdisks, which allows you to create test partitions of up to 10Mb. Only try it out if you are sure you know what you are doing. ■

Ami-FileSafe

Price: £69.75

Supplier: AS mail order (pages 34–35), or Fourth Level Developments

Contact: AS hotline 01225 822511
Fourth Level 0117 9854455

Verdict: 80%

Flexi-Link

For quite some time the only quick and cheap way to link two Amigas together has been with Parnet. Flexi-Link wants to change all that as **David Taylor** finds out.

Q uite a staggering amount of AS readers actually own more than one Amiga if our reader survey is anything to go by and the first thing you tend to want to do when you've got two machines is link them together. The only feasible method for most people has been through a form of parallel link, which, until recently, has meant Parnet.

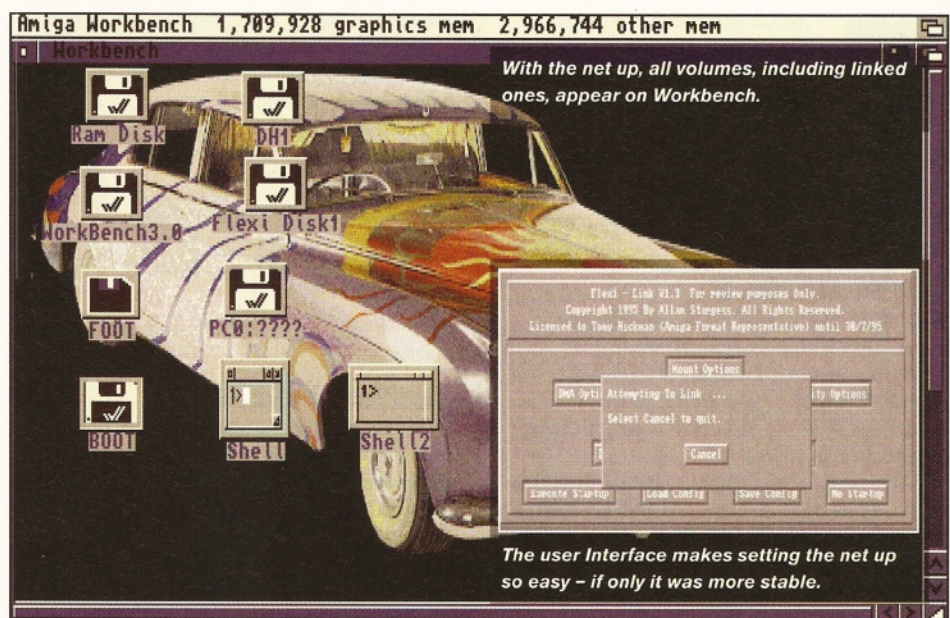
Parnet has several drawbacks: it can be tricky to set up, sometimes simply refusing to recognise the other computer. You can end up messing around for hours with mountlists, trying to get the net up. Once up, the problems aren't over – Parnet frequently throws up requesters for no apparent reason, which becomes more than a minor annoyance when you are copying lots of files. It is also quite slow. A new piece of software, called Pronet, tried to improve on this and did attain better transfer speeds.

Flexi-Link takes a whole new approach to the subject and, although it uses a custom cable like Parnet, the similarity ends there.

The package consists of two disks, a manual and a cable. The theory is simple: plug the cable into both parallel ports and boot each computer with one of the disks. You should then get a screen with the Flexi-Link interface in the background and a requester in the foreground saying it is attempting to link and then one confirming the link and asking you to continue.

So far, so good. Once you get to here, all you need to do is state which drives you wish to mount and which one you wish to boot. In order to boot that drive, the program re-assigns all the necessary paths, like s:, t:, devs, sys:, etc., to the hard drive. Then it should all boot and everything should be OK. The same should then be done on the other machine and voilà, two linked computers.

The advantage over Parnet here is that all the drives will appear on your Workbench screen and you can access them as if they were simply part of your standard hard drive. When this works, it is superb; you can run programs from the other hard drive and I barely noticed a difference in the time it took to load. It has to be said that I'm used to one of the drives being quite slow, but, even so, the ability to run programs like this over the net is impressive. Thus far, it scores heavily over Parnet. However, Parnet has one niggling plus, you can access



the RAM on the other machine, whereas Flexi-Link can only access a RAD drive (i.e. a recoverable RAM drive).

It is theoretically possible to install Flexi-Link on your hard drive by simply copying the program across and using it as a CLI command. In practice, I'm afraid I couldn't run it from hard drive. There are various commands that need to be made resident and I suspect that the versions I was using were too recent.

Here comes the crunch... Flexi-Link isn't stable enough. Like Parnet, there are problems.

Flexi-Link worked fine when I had an A1200 and an A1500 linked up, as long as I only went as far as Workbench on one machine and left the other at CLI level. As soon as I went to Workbench on both, they froze. Trying it on an A4000, it crashed immediately and on an A3000, the Workbench problem re-occurred. It also throws up Intuition attempting to reset Workbench requesters far too often.

I am very impressed with Flexi-Link to a degree. As long as I only use it on one computer to access the other drives, it's fine and I have got a use for that, but it needs debugging so that it works on all Workbenches.

Speaking to its author, we came to the conclusion that the problems I experienced probably arose from the different OSs, because

he is adamant that he can't replicate my experiences. So, it's possible that it would all work fine on a standard computer, but who has a standard computer? There isn't an Amiga in this office that's set up in the same way as any other.

What I would say, then, is that we need a version 2 software, which would include a hard drive installation script and a Workbench icon, with all the necessary commands made resident, so that you could launch it from Workbench as opposed to CLI only. The startup-sequence on the floppy needs tidying as well, so that the Shell is closed when Workbench is loaded.

The problems then are a mixture of minor and major flaws, but all of these could be overcome with some effort. I sincerely hope that we will see a second, *stable* version of this piece of software. Since I'm stating my "wish list", how about dropping the price closer to the £20 price tag of Parnet and also including an option to state the length of cable you want? ■

Flexi-Link

Price: £39.95

Supplier: Alan Sturgess

Contact: 01452 306252

Verdict: 60%

CD-ROMs

This month Amiga Shopper supplies coverage of a staggering 19 compact discs. David Taylor gets to grips with the mountain of CD-sets he's had to scale.

The CD suppliers certainly aren't messing around this month. Not only have we got seven CD-sets to review, but a total of 19 discs are covered. From more of the tired formula to some brilliant new additions to anyone's CD-collection...

Light ROM 2

This CD is dedicated to LightWave/Toaster users. It contains hundreds of megabytes of objects, textures, images, PS fonts and scenes. Thankfully, there are thumbnail renderings of all the objects to save you having to load them in yourself.

The quality of the objects varies, as you'd expect when there are so many, but, overall, I was quite impressed. Aside from the collection of PD objects, there are also some professional objects, including a collection of objects and texture maps by Kevin Lude, which were previously available commercially.

Some of the objects have been around for a while, like the demo objects for Mangababes, but the collection does provide a

reasonable library. The categories are so well arranged that finding the sort of object you want is easy. At the price, I think this CD-ROM is truly excellent value and an asset to all LightWave users.

Light ROM 2

Price: \$39.95 (approx. £25)

Supplier: Amiga Library Services

Contact: 001 602 491 0048

Verdict: 90%

Star buy



Texture Gallery

From the same stable as Light ROM, this double-CD pack is a brilliant accompaniment to the former CD. This one contains 1.3Gb of textures supplied in a variety of formats: IFF, Targa, JPEG, PICT, SGI and TIFF. As with the other CD, there are thumbnail indexes to help you choose the best texture.

The textures are sensibly divided up, with directories containing different styles of texture, such as wood or marble, which allow you to choose from different types of the sub-group you need.



The textures range from carpets to fire and really come into their own when 3D modelling.

OK, so looking at a set of carpet examples on screen isn't the most exciting prospect, but this is an ideal way of getting top-quality textures for all occasions.

Texture Gallery

Price: \$44.95 (approx. £30)

Supplier: Amiga Library Services

Contact: 001 602 491 0048

Verdict: 95%

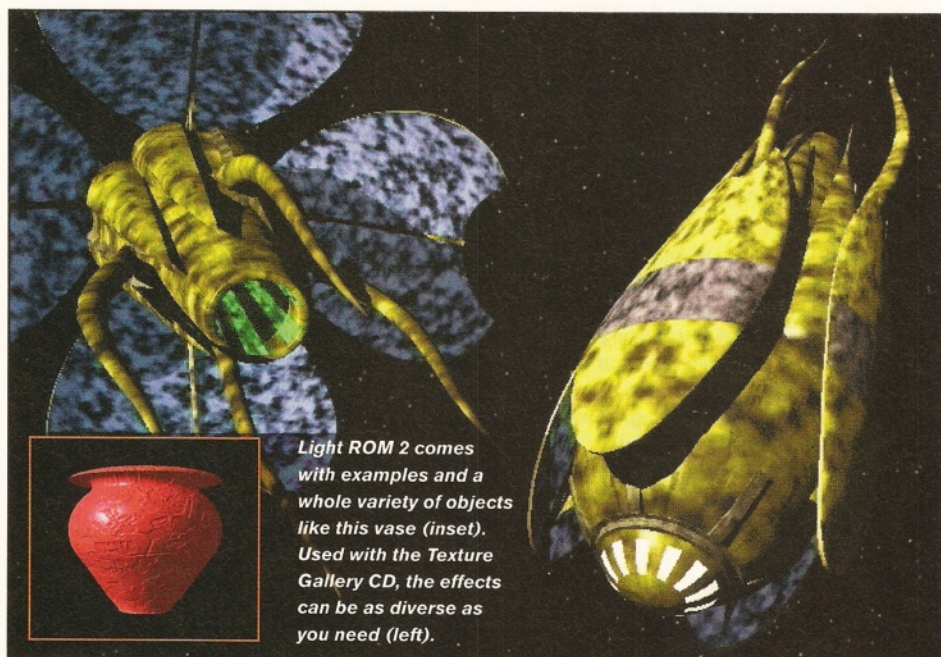
Star buy



The Sound Library and GRX Workshop

This double-CD pack was a tad baffling. It is a collection of shareware for both the Amiga and the PC, with the programs separated into the appropriate directories.

However, as far as I could see, almost all the CDs were solely dedicated to music, with only a cursory selection of graphics



Light ROM 2 comes with examples and a whole variety of objects like this vase (inset). Used with the Texture Gallery CD, the effects can be as diverse as you need (left).

A Drop in the Ocean

This CD isn't actually a CD-ROM. It's an audio-CD by The Craft Brothers. No, AS hasn't turned into a music magazine; the songs on this CD have been created using an Amiga. Each CD comes with an Amiga support disk, packed with information about the musicians, their work and music files. As such, the CD should be of interest to all Amiga musicians up to the professional level. For details of the floppy disk and the music disk magazine, as well as the Compact Disc, contact the musicians themselves at 12 Mount Road, Halton, Runcorn, Cheshire, WA7 2BH. ☎ 01928 568762.

programs, which is just fine, but makes the title a little odd.

There's no denying that it is the most complete collection of modules and samples that has been produced, but this type of collection is getting a little tired. Last month we saw the Terra Sound Library, which I thought was ideal for anyone who wanted to get a good collection from scratch. It seems that I have little choice but to draw the same conclusion about this CD, but it's hardly innovative stuff. There's just a hell of a lot on there.

The Sound Library and GRX Workshop

Price: £19.99

Supplier: PD Soft

Contact: 01702 466933

Verdict: 87%

Ten On Ten

Small on packaging (thankfully), but large on content, Almathera have launched a rather mind-numbing CD-set. Ten On Ten, in case you haven't guessed it, is a pack of 10 CDs.

Most of these CDs have been released before, but there are three new discs. Some of the CDs are a little lame, but you cannot deny that this *does* offer incredible value for money. With thousands of megabytes on offer, it must work out at around a penny per Mb. Not everything will be of interest, but you won't be hard pressed to find *something* of interest.

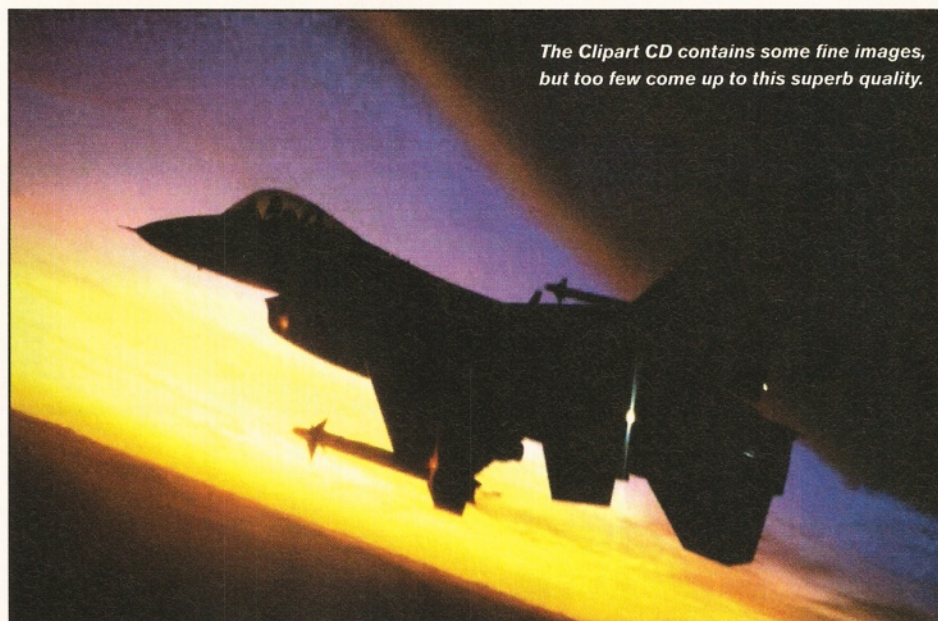
Some of the highlights are the World Vista



Almathera's Ten On Ten supplies everything from photo images of flora and fauna...



...to photos of Hollywood movie stars, as well as slightly less glamorous cars and planes and...



The Clipart CD contains some fine images, but too few come up to this superb quality.

Atlas, a multimedia presentation of sorts, with in-depth cross-referencing, which makes it ideal reference material for school children. I had some trouble getting the Illustrated Shakespeare to run, but the bard's works, complete with pictures, makes it another useful CD. Two of the new CDs, the fonts and clipart CD and the photo library CD, are instant libraries for people who want to jump into DTP.

The other discs in the set are as follows: CDPD 1, CDPD 2, Demo 1, Pandora's CD, Team Yankee, Networking and Comms CD. At this price, it has to be the buy of the month!

Ten On Ten

Price: \$39.95 (approx. £25)

Supplier: Almathera

Contact: 0181 687 0040

Verdict: 97%



Star buy

World Of Clipart

Another double-CD set, this time with a collection of around 40,000 images. The trouble with this CD is that the images aren't of the best

quality and some of them have been included on many other discs.

Clipart is a useful short-cut for DTP and professional users who can't, for reasons of time or ability, create their own images. The images are Public Domain so that they can be included in your work. World Of Clipart provides a huge library of such images, but a lot are useless, because they aren't of sufficient quality.

Some of the mono images are awful and only there to fill up space, whilst the colour ones are not all of photographic quality, which they should have been on a CD. Then, everyone can downgrade them to the quality they require. Some of the pictures are top-quality, but others are simply poor quality scans of line drawings.

Had Almathera's CD-set not contained their two new discs that cover this area, I might have been kinder, but I'm afraid other sources simply provide better value for money.

World Of Clipart

Price: £17.99

Supplier: Epic Marketing

Contact: 01793 514187

Verdict: 63%

Hottest 5

This latest collection of software comes with a booklet that acts as an index to help you find the programs you want. Each archive (the programs are stored in lha format) has a short description.

Whilst there are some things of interest, such as music programs and WB utilities, as well as 3D objects and JPEGs, this CD is a little game-heavy for the serious user.

It would be more sound to invest in the latest Amint CD, to be honest. ■

Hottest 5

Price: £19.99

Supplier: PD Soft

Contact: 01702 466933

Verdict: 60%



...even a complete and illustrated set of Shakespeare's works.

<p>^ ^ ^ 4337 (AGA) A/THRUST An Amiga 'Thrust' type game. No 'ENGLISH' docs</p>	<p>MSDOS commands & then they can be used through the shell as if they were AmigaDOS. ^ ^ ^ V1661 (AGA) NAT'L LOTTERY</p>	<p>vice-versa nfs-like file access. ^ ^ ^ V1723 VIRTUAL REALITY [020] This program allows you to walk, drive and fly</p>	<p>Seven must have games for anyone with Professional Draw. The genres are PieCharts, Stars, Emboss/Engrave, ScalePercent, ZoomWindow, Select-BOARD SYSTEM V8.4 Up to 99 file libraries with extended filenames. Up to 99 fully threaded message conferences. Number</p>
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107 AMINET 5
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● **CDTV** remote mouse, disk drive and keyboard. Also network CD and Parnet cable £170 ono. Emplant board for sale: brand new, unused. STLG170. May swap for other hardware. Call Arthur ☎ 01142 681059.

● **Sporster** USB 14,400 modem with software and manuals, £80. 3.5" IDE 546Mb hard drive, unused, under full warranty, £100. ☎ 01342 321953.

● **Miracle** keyboard, under guarantee, boxed, as new, with stand and books, £80. ☎ 01342 321953.

● **A1200** 6Mb RAM 68882 40MHz co-processor, 1940 monitor, Star LC200 colour printer, games, ribbons, paper, books etc. All boxed. £500. ☎ 01342 321953.

● **Upgrade** your A4000/030 with a Commodore A3640 card, 25MHz 68040 CPU as fitted to A4000/040. £400. Barry Winter, Denmark ☎ (+45) 98 18 35 64.

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● **Harlequin** 1500 video card plus all software, as original, £300 ono.

☎ 01585 538507.

● **A1200**, GVP 40MHz 68030, 6Mb RAM, 170Mb HD, Overdrive, CD-ROM, monitor and

software. Offers around £1,000. May separate. A. French, 874 Woodborough Road, Mapperley, Nottingham. NG3 5QQ.

● **Genlock** - GVP G-Lock, half price, £145. Computer stereo speakers, Screen Beat Three, never used - £10. Various Commodore/Amiga handbooks and software - ring for info. Plymouth ☎ 01752 551850.

● **Microway** Flicker Fixer for A1500/A2000/A3000/A4000 complete with manual and software, £85. Also A500/A1200 PSU, £15. SAS/Lattice C v5.1, £40. Call Ian ☎ 01727 868800.

● **GVP** 0303 combo +4Mb for Amiga 1500, £250. 173Mb hard drive, £100. V-Lal 24-bit frame grabber, £175. ADPro 2.5 and Imagine 3, £50 each. Understanding Imagine, £20. John ☎ 01332 769666.

● **Amiga** A3000T (tower), 105Mb HD, 18Mb RAM, Commodore 1960 multisync monitor, software, £1500. Videopilot V330 editor with new enhanced Amiga software, two infrared mice, £400 ono. ☎ 0171 978 9893.

● **A3000** 10Mb RAM, 121Mb plus 237Mb hard drives, Opal, 1950 plus Philips monitors, BJ300 inkjet, spare keyboard, Imagine, Essence, ADPro, ProPage, Art Expression - £900 ono. May split. Rich ☎ 01242 518117.

● **WB** 1.3 ROM, 512K RAM expansion, £10 each. Wordworth V2, £18. All ono. ☎ 01463 791841. Ask for Robin (after 6pm).

● **Amiga** 500 1Mb RAM 385. 2Mb external RAM, £75. Videomaster digitiser, £55. Colourmaster RGB Splitter, £55. All boxed with manuals and software. All for £250. Telephone Paul ☎ 0121 628 8487.

● **VXL30** 25MHz 68030 accelerator for A500/B2000, £100. GVP HC8 SCSI controller for B2000 6Mb RAM 40Mb hard disk, £150. Vidi Amiga 12 digitiser, £45. ☎ 01373 461053.

● **Vortex** Atonce Plus 286 PC emulator for A500. Easy to fit (no soldering). £100 ono. Mike ☎ 01772 797197.

● **A1500** + WB2, 48Mb hard disk 3Mb RAM, £200. 1084S monitor, £140. A2630 25MHz 030 + 882, 2Mb 32-bit RAM, £230. Complete, £520. Postage free! Bargain! Call Colin after 10pm on ☎ 01482 844388.

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- **CU Amiga** Feb '95 needed for user group here in the States. Please share with American Amiga users as this issue did not make it here to the States. Thanks T.O.G.A. 165 Blossom Hill Road, #157 San Jose, California 95123, USA.
- **Imagine 3** and LightWave users - I want to contact anyone who uses the above. I run an Imagine user group and need contributors.

Interested? Phone Spencer on 01375 670036.

- **I need** Amiga Workbench 2.1 (including extras, fonts, disks etc). Will swap for Amiga utils, games, PD etc. Chris Jackman, 3 Albion Terrace, Letcham Road, Litcham, Kings Lynn, Norfolk. PE32 2QQ.
- **Contacts** wanted - special affection for AMOS but anyone welcome from beginner to expert on any subject, Amiga or otherwise. Write to Alan, 23 Crouch Park, Pooles Lane, Hullbridge, Essex. SS5 6PX.
- **Opalvision** 24-bit graphics board for Amiga 2000. Will collect in England or Wales. 01902 683158.
- **I would** like to talk to someone who has an Emplant running on a 4000/30. 01257 482266.
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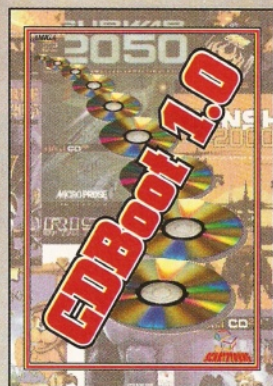
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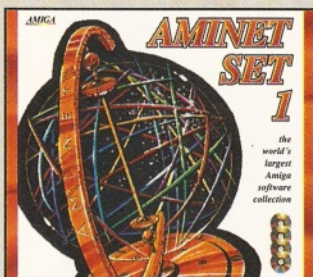
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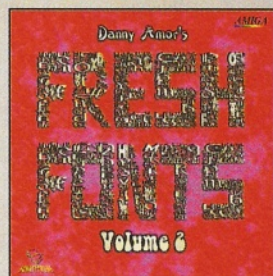
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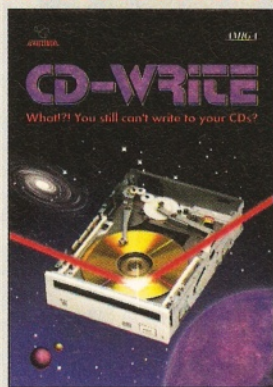
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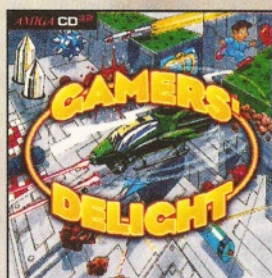
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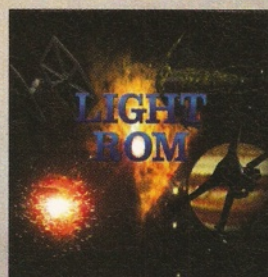
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What? You still don't write to your CDs? CD-ROMs have long been an essential part of Amiga computing. Many users already own a CD-ROM drive, and the number of software packages available on CD is increasing steadily. Until now, though, it was not possible to write to CDs. We have solved this problem with our new revolutionary product: Ralph Babel and Stefan Ossowski's Schutztruppe are proud to present what can be considered a marvel of technology: CD-Write enables you to virtually write to CDs with an ordinary CD-ROM drive. From now on, you will be able to write, delete, and modify data on your CDs. This product will take you to a new era, and you will be able to utilize CD-ROM technology to its fullest. **\$44.95**



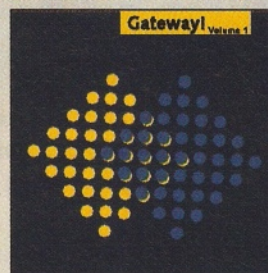
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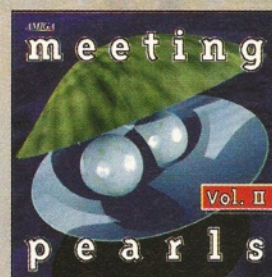
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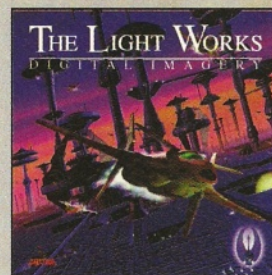
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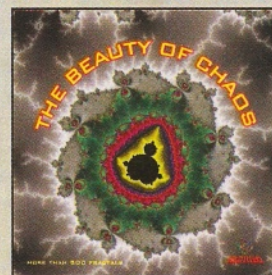
Gateway! offers NetBSD 1.0, a full featured UNIX-like operating system with both sources and binaries for the Amiga, i386, Sun 3, and other architectures. Go networking with the large selection of supplied networking tools. Other supplied packages include a binary release of the X window system [X11R6] for the Amiga, with many additional clients, and packages such as perl, emacs, games, mail programs, and many megabytes of important text files such as RFCs and FAQs. A complete installation guide is available on the CD. There are also some AmigaDOS internet utilities, such as clients for AmiTCP and Envy. **\$9.95**



The Meeting Papers Volume II contains 650 MB of the finest FD software via a special user interface, which has been created to allow you to find the program of your choice with ease. The contents: 35 MB of selected hit-graphics - 50 MB graphics programs and data-15 MB games - 10 MB from "The Party '94" - 13 MB disk, hard disk, CD-ROM and SCSI tools - 19 MB various other tools - 11 MB educational software - 25 MB terminal programs - 25 MB animations, mainly from Eric Schwarz - 40 MB developer tools (e.g. pre-installed compiler (DICE, Oberon, Modula), Commodore-Includes, GUITools) - 9 MB music programs - 10 MB midi programs - 27 MB pictures - 60 MB texts, FAQs, CD contents files, etc. - 40 MB linux for Amiga - 100 MB Tex installation (PosteXt, incl. 600 dpi and fax fonts) - 38 MB movie data base - 50 MB archives for Psion - 18 MB modules - 50 MB NetBSD for Amiga, ... **CD 95**



Raytracing - A fascinating area of the computer graphics. Pictures from the computer, perfectly rendered, fascinate people all over the world. The Amiga was the first computer to be used for raytracing, and today it is still a leader, with many high quality programs. A real artist of raytracing is Tobias J. Richter from Cologne/Germany, whose detailed objects turn the people. Especially his space ships of famous science fiction films are used to demonstrate the capabilities of a raytracing program. The objects are highly detailed and extremely realistic due to the application of complex surface textures of the models. Until now it was difficult to create these objects in order to create one own scenes or animations. **\$39.95**



Dive into the fantastic world of the fractal geometry and make a safe journey through the depths of the mandelbrot set. This CD includes: 507 mandelbrot pictures in GIF format (256 colors) in the resolutions 1140x890, 1024x768, 640x480 pixel, 20 selected true color pictures in TIF-format, Graphic viewers for PC, Amiga and Macintosh (packed). **£14.95**



The FreshFish CD-ROM-series, produced directly by Fred Fish, provides Amiga users with hundreds of megabytes of the latest freely redistributable software. Published approximately every two months, each volume is a two CD set containing new submissions since the latest volume, as well as an ever growing selection of tools, libraries, documentation and other useful material that is updated with every release. £29.95



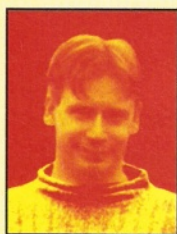
Volume 2 of the GoldFish series contains a selection of software, animations, pictures and other material released on FreshFish CD-ROM's between October 1993 and November 1994, with most of the material updated to the latest available versions. All material is included in both archived (BBS-ready) and unarchived (ready-to-run) forms.

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This month's winner is Mike Docherty. This picture was created with Imagine on an A1200 with 8Mb RAM on a Microbotics 50Mhz 030 accelerator. Rendering required three hours and a further 7Mb of virtual memory. If you want to win £25, render or draw a picture, save it as a JPEG and send it to: **David Taylor, Future Publishing, 30 Monmouth St, Bath BA1 2BW.**



Hello there. I am David Taylor and this is where I get to tell you a little bit about this month's Amiga

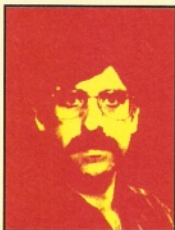
Answers. As ever, it's packed with answers to your problems and topped off with some hints and tips to help you solve those annoying problems that inevitably crop up now and then.

I'd also like to point out I intended to get my hair cut before I was immortalised in red and yellow, but I was too busy, er, cramming all the stuff on to the Coverdisks for you. Honest!



Paul Overaa is our Operating Systems programming expert. He has written several books, including: Mastering Amiga Assembler, Mastering Amiga ARexx and Mastering Amiga C.

His main interest is in program-design and he is heavily into the music-side of the Amiga. Paul's other interests are red wine, maths and wind-surfing!



Gary Whiteley is our expert on video and graphics. He regularly produces work for films and TV. Gary has also written books – amongst them is Amiga Desktop Video, published by Future Publishing.

Gary also regularly reviews new products for Amiga Shopper – if you turn to page 36, you'll find out what he thinks about Scala MM400.



Toby Simpson is our code clinician. He writes our DICE and Assembly tutorials. He has written several books, including ARexx: Your Built-in Turbocharger, published by Future. Toby's day job is

working for Millenium Software, programming their games, which just goes to show that he knows a thing or two about his subject!



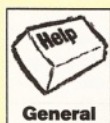
Larry Hickmott is our DTP and word processing expert. He produces his own DTP magazine called Em and has written several books on his favourite topic. He has just finished a book called

the Wordworth Companion for Digita and Future Publishing's books division. He has written our huge Supertest of scanners this month (see page 22).

AMIGA

ANSWERS

Merging files in Superbase



General

On my Amiga 500, I used Superbase Personal to catalogue my CD-collection. Because it is fairly large, it was necessary to store it on two discs as CD1 and CD2.

I have now purchased an Amiga 1200 and fitted a hard drive and accelerator. With this in mind, I now want to combine the two files on the hard drive into one, whilst still retaining the Sort facility.

I am sure that there is, within the program, a function to help me do this, but like many user guides, it's double-Dutch.

Could you explain in simple terms, the way to combine these two files. My only other recourse is to re-enter all the records from one of the files.

Bob Lawrence
Essex

This is a problem I came up against many moons ago when I went through the same process as you and the good news is... yes it can be done, although I'm sure you'll agree that Superbase on the 1200 isn't as stable as it is on the 500.

To merge your two files, follow these steps. First choose Open (Project menu) and select the second of the files, which I gather will be CD2. Once this has loaded, choose Export (Process menu). A requester will appear on-screen. Click on OK without having selected any of the filters. A Filename requester will pop up and type a name for your file such as 'File2' into there.

Now close your file and choose Open (Project menu) and select the first of your CD files, which should be CD1. Once that has loaded, choose Import (Process menu) and again click OK on the filter requester without having selected a filter. A Filename requester will again appear, into which you would type 'File2'.

This, remember, is the second of your files that you exported and will now be added to the first file already loaded into Superbase. Save the file and, there you have it, all your records in the one file. Larry

the same time, it is less brilliant and produces very annoying bands (at 360 dpi as well). These are smaller if the Microwave function is on, but visible and thus annoying.

The Studio Picture Printing program uses a different output module, has other settings and parameters and the results are quite horrible. Much too dark, too much red and the colours leak through the page.

Unfortunately, the settings for both are different and cannot be combined (at least I don't know how to do it). I could not configure the Studio Output Module based on the parameters of the Workbench driver. Furthermore, even with 50 different dithers, the one that is used by the Windows driver is absent and I could not find the corresponding matrix to introduce the data into Studio.

Does anybody know where I can find this type of information. After three weeks of testing, I used about two ink cartridges and over 200 pages for 720 dpi and I am still searching for output I'm proud of.

Then I started looking for some help through the Internet and found that another driver was available in the US from Endicor. When I received this one, I started all over again to find out that the Workbench driver has some strong points, but some weak points as well.

First of all, it enables you to calibrate the printer, similar to the Windows calibration program and there is a colour correction option so that the colours do not bleed or leak. And even with Microwave on, there is no visible bands at all. However, this driver only works with the three dithers from Workbench and the output, therefore, is very disappointing.

Before eventually buying Turbo Print 3 Professional, I would like to hear some of the results obtained by others. I am interested in your advice or any suggestions that can help me.

Weyens Guy
Belgium

Printer drivers - who needs them! Having used the Epson Colour Stylus PC driver written by a company called Software 2000 in the UK, the rigmarole involved in using

Answers contents

If you are looking for a solution to a particular problem, why not try using this handy index to the questions in this issue. It's arranged by topic, so if you are being kept awake at night by a noisy hard drive, then be on the lookout for any mention of hard disks.

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Driving the Stylus



Printers

In the May issue, I found that the Epson Stylus Colour printer won second prize in your Reader Awards. I presume that several readers have this printer, so I would like to address this letter to them as well. I totally agree with their choice - however, I still do not get the quality output I have seen with a PC and am thus looking for some help and advice.

I bought the Epson Colour Stylus printer about one month ago after viewing some results obtained using a PC at 720 dpi. After installing the printer, I installed the Studio II Professional program which gives you the capability of using the Stylus with the Amiga.

The best results I obtained were with EpsonP2Prefs driver (printing from PPage 4.1, PageStream 3.0g, Brilliance 2.0, or DPaint IV AGA) which gives a result comparable to the PC-output, although at

Unable to open your tool



Many people are baffled when they double-click on an icon on Workbench and get an error message like this. It's a very simple problem with an easy solution.

If an icon doesn't relate to a program or an executable file, which mostly means documents, scripts, pictures and the like, there is often a "default tool" specified. When you launch this icon, your Amiga will attempt to load that program before reading the file. So, for instance, if you've created a picture with DPaint and then click on its icon, DPaint will be loaded and that picture will be loaded in automatically.

To see which tool is designated for an icon, single-click on the icon and then select "information" from the Icons menu on Workbench. The program is specified in the "Default Tool" box.

Normally none of this causes any problems, but sometimes the Amiga cannot find the correct program. This can be quite simply because you don't have the relevant program, as is often the case with specified text readers.

So many different readers are available that people often specify one other than the Amiga standard "more", which doesn't offer very much in the way of

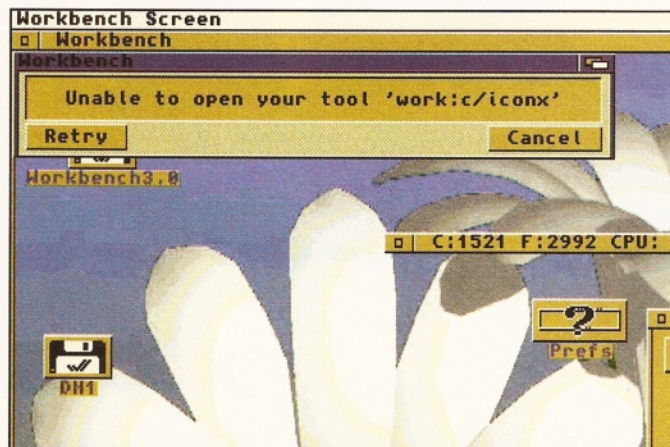
control. Common ones are PPMM (Power Packed Much More) or Fullview. If the document is plain ASCII, you can change the tool to More or any viewer you have and if it's in HyperText or AmigaGuide format, you should specify Multiview or AmigaGuide depending on your system.

If the tool simply specifies the program - for example, "More", then you must ensure that the program is within the search path for your Amiga; on a standard machine that means C:, SYS:Utilities, or the like. Check your startup-sequence in S: to see what search path you have set up.

If the program is not within the search path, you must note the correct path in the icon, e.g. "SYS:MyUtils/More". Sometimes the path may not specify the volume name - for example, "utils/more".

In this case the ":" makes the Amiga look on whichever volume or partition the icon is on. So, if you have the document installed on a floppy disk called CoolProgs, the icon would be instructing the machine to look for more in the utils directory on that disk.

Then, you must make sure More exists there, because even if More does exist in your normal search path, the icon is sending specific path instructions. I'm sure there's a possibility for a "path-o-



It's a good idea to get to grips with the idea of default tools, because they can be made to work for you and save you from annoying errors.

logical" joke here, but I'll avoid it.

Because people often set their icons to their system, PD programs that are passed on often cause default tool errors and it's best to change it to suit yourself. With scripts sometimes used to install programs, IconX is often named as the tool. IconX is the command that Workbench uses to execute scripts, but more often that not, the path is incorrect. Again, simply change the path in the icon information (IconX

should be in your C: directory).

It's a good idea to get to grips with the idea of default tools, because they can be made to work for you. Remember that DPaint picture? Well, why load the full DPaint program every time? Maybe you'd rather use a program like Viewtek, so open up the information and change the tool to Viewtek, remembering of course to specify the right path.

For more information, refer to your Workbench manual. **David**

Amiga drivers just goes to show how badly Commodore got it wrong when designing the printing system with the Amiga. Not that Windows is that much better, because there are still problems with it, but, as you point out, the output from the PC is very good.

It is worth remembering, however, that the Stylus Driver you refer to for the PC is written by a large company that specialise in writing specific drivers. Studio 2 on the other hand is written by one man and contains many drivers for a large variety of printers. It took Wolf two years to write, working day and night, and although it isn't perfect, the reviews in Europe have given it a much better reception than Turbo Print 3.

I used Studio 2 during the Supertest of InkJet printers (see page 22 in AS51) and found the output to be very good indeed. In fact, a representative from another printer manufacturer saw the samples from it and took a couple of them with him to use as a guide for their own printers.

My advice, based on the results I managed to get after testing the printer for only three days, is that if you are printing pictures, use the Picture Printing application program. The colour adjustment is much easier to use than the one in the Prefs program for Studio and the results are very close to those found using a PC.

When using applications like ProPage and Final Writer, I did find there was too much black on the page, but this is a problem I expect the author will sort out when he comes back from holiday. The problem only

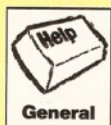
happens in colour mode from applications like ProPage and Final Writer and it is possible to reduce the black using the EpsonP2Prefs program.

On the subject of Endicor, they are working on better drivers, but bear in mind that it took two years to develop Studio 2 and I don't expect Endicor to come up with a miracle driver overnight. And as for Turbo Print 3, there isn't any sign of it appearing on English shores. The best advice I can give to get output you're proud of, is to write to Wolf and discuss with him how you get more from Studio.

After all, no-one knows Studio 2 like the author does. In the meantime, maybe all those Colour Stylus owners would like to write in and tell me what they think of the output they are getting with a couple of samples for me to judge one against the other.

Larry

Replacement Amiga manuals



A few weeks ago, a friend sold me his A500, but, unfortunately, he has lost the user-manual. Last week, I bought another Amiga - a second-hand, two-drive A1200 - but, to my dismay, again there were no user-manuals. Can you tell me where I can buy these items?

Stephen Hyde
Lemington Spa, Warwickshire

All Commodore items are in short supply at the moment, but CPC (☎ 01772 654455) should be able to supply you with at least the A1200 manuals (I believe the price is about £13 with postage). Previously, they have had A500 manuals in stock, but, to be honest, I would imagine that supplies of these have long been exhausted.

Word processor power



Next year, I am moving into sixth form and will be studying English, history and computing. Currently, I use Final Copy II Release 1 to write essays, stories and so on, but have now decided to buy a better package.

I have an A1200 with 85Mb hard drive, but no expanded memory. I am undecided on whether I should buy Final Writer, Wordworth 3, Final Copy 2 Release II, or Wordworth 3.1 SE.

Are Final Writer and Wordworth 3 too powerful for my requirements? Which of the above would be better suited for me? I will need to write essays, including quotes, novels and perhaps reports in my three subjects. Will Final Copy II be sufficient? Which is better for my needs - Final Copy II, or Wordworth 3.1 SE?

Chris Maynard
Aberdeen

Choosing a word processor has to be based on your needs and the best person to make the

decision is you, because only you can weigh up the pros and cons of each product in relation to the features found in the programs you mention.

I, for example, use a text-based word processor called Protext because it's quick and doesn't get in the way of the writing process. I've now written seven books and Protext suits this purpose. I could have used any of the word processors you mention, but for large amounts of text, Protext is best for me in my opinion. Others will no doubt disagree, because we all have different needs.

Your first task is to make a list of the type of documents you need to do. The type of questions to ask yourself are "Do I need to use pictures and what formats (IFF, GIF, PCX) and so on need to be supported by my chosen program?"

The high-end word processors like Wordworth and Final Writer are both pretty similar at a glance, but do differ in some significant areas which I'll go into in a minute. Final Copy II release II and Wordworth 3.1SE are also very good, but lack the features a serious user, like yourself, will probably require a year or so down the road. I always feel it's better to spend another £20 or £30 now, instead of spending £60 or £70 later, when you find you can't do without certain features.

So, my advice is to go for either Final Writer or Wordworth 3.1. Before you do, though, you will have to add a little bit of memory to your Amiga as both programs operate much better in 4Mb of memory than they do in 2Mb. Your next step is to choose between Final Writer and Wordworth and this is where you need to ask yourself a lot of questions.

Although both programs share a lot of features, they do differ, as I just said, on some significant ones. Wordworth, for example, has support for tables, text frames with multiple lines of text, mail merging with more than one record per page, support for CGM graphics popular on PCs, a Print Manager for enhanced output, the ability to view pages side-by-side, text effects for rotating, twisting and creating special effects, plus support for True Type fonts.

Final Writer, meanwhile, has a much more flexible system for sections within a document making it ideal for reports and so on. It also has a very good system for tagging text to help you keep text looking consistent. The creative side of the program enables you to stretch and rotate text and if you were wondering about text effects, they too are supported by using a third party program called Final Wrapper to automate the process. Final Writer has better PostScript support through the use of NimbusQ fonts.

The bottom line is that both programs are very good and, at the end of the day, it's what you want from it that matters. You mention stories for example and both programs can handle that, but if you want to include tables in your stories then you need to choose a program that supports that function.

To complicate matters further, I know that both publishers are looking at the features

supported by the opposition and will be implementing a number of these in further versions that will probably appear in four or so months time. In light of all this, it would be wrong of me to make the choice for you, because I don't know your exact needs. As a starting point, make a list of the things you want the word processor to do and then get specification sheets for both of them and see which one best supports all the functions you require. **Larry**

Hard disk installation



I wish to upgrade my A1200 by installing a hard drive. The two drives I have in mind are the 120Mb Siren 2.5 inch, or the 270Mb Datel 3.5 inch. Would there be any problems and would I need to buy any extras?

A Stanley Parkstone, Poole

In most cases physically fitting a hard disk is very straightforward, although users do sometimes have problems with formatting, partitioning and so on.

All companies will provide the necessary fitting instructions, cables, partitioning software and so on, and many will also have formatted and partitioned the drive and installed the Workbench software for you.

Siren Software not only do this, but will actually fit the drive for free, providing you can get the machine to them. Datel, and most other companies, are also usually happy to help in this way, providing you give them a little advance warning. **Paul**

1950 monitor problems



I have a problem with a Commodore 1950 multisync monitor (made in 1990) which I purchased cheaply because it was faulty – it kept blowing the internal fuse when switched on.

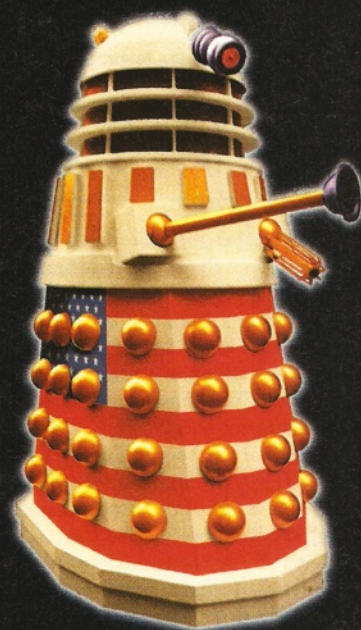
After lengthy investigation by my father (whose hobby is electronics) it seemed that two transistors were misbehaving and, after months of trying to trace some replacements, we finally installed two new transistors and at last got the monitor to power up without blowing the fuse. So far so good.

But now we had another problem – a high-pitched whine coming from the motherboard which was rather hard to trace, but which altered pitch if the contrast or vertical adjustment knobs were turned, or the display switched between analogue and TTL.

Since the heater guns on the end of the tube are working, we guess that the low tension circuit is working OK, although it looks like the tube itself is not getting "excited".

We have not been able to try the monitor hooked up to my A1200 since the lead which

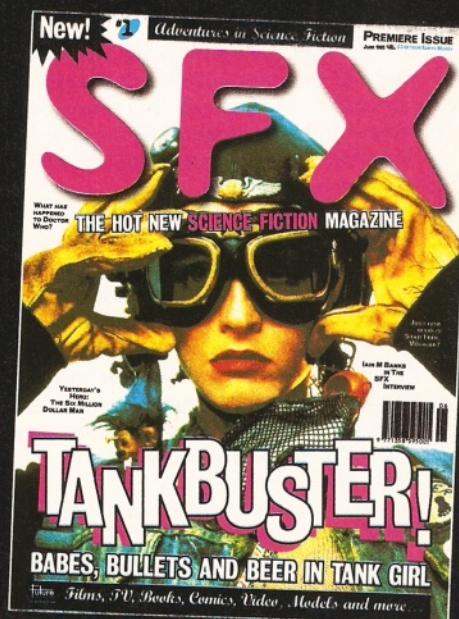
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Cable problem

It seems like quite a few readers are often at their collective wits' end when they find themselves in need of a non-standard cable. There are very few stockists for the more unusual cables, but one place to try is RSD Connections Ltd. ☎ 01992 584205

61 should connect the monitor to the Amiga (which I am told should culminate in a 15-pin VGA plug) is missing. There is a row of 10 pins on one of the circuit boards, but we don't know which is which, apart from pin 1, which is ground. Perhaps it would be possible for you to inform me of the correct connections?

We have tried several connections, none of which has worked. Do I need to set the computer up for a multisync display before trying the monitor? I tried the connections you gave for the Mitsubishi multisync in AS48, but this just crashed the computer.

Commodore Technical Support were (as always) less than helpful, even to the extent of saying that Commodore never even made a 1950 monitor.

**Wayne Coombs
Radstock, Bath**

Obviously, you knew you were taking a risk buying a faulty monitor, so I won't do my usual sermonising about buying something which doesn't work, except that you didn't get a manual with it. What I am surprised about is that you haven't taken the direct route and contacted a monitor repair specialist (you'll find several ads in Amiga Shopper and other Amiga magazines, as well as in your local Yellow Pages) and tried to get your 1950 fixed and tested by an expert – though no disrespect to your Dad here.

I'd make a few phone calls and see if you can find someone willing to fix the monitor (or at least who'll be able to give you an honest appraisal of what's wrong with it and how much it might cost to fix), otherwise this could drag on for ages.

Out of interest, when you power the monitor up, can you feel any "static" coming off the front of the screen? If not, you can probably assume that either the tube or the HT circuit is faulty. I'd make an educated guess (though I'm not an electrician or TV repairman) that the whining you mention is caused by a faulty HT transformer, and you may well have trouble getting a replacement. Again, I'd recommend you contact a professional repair shop.

As far as your using the connections for the Mitsubishi go, I would advise you to be careful when you have no idea what connects where! Not all monitors use the same pin layout and you could possibly risk damaging the monitor if you make a mistake. Certainly using one set of connections and transposing them to another monitor isn't a good idea.

As for Commodore Technical Support not being very helpful, I'm not particularly surprised given the amount of pressure they've been under since the liquidation

began. But denying that they had anything to do with the 1950 seems a little out of order to me, unless you were talking to a secretary.

I tried calling Commodore Technical Support myself, but there was no one available to deal with me at the time. I also tried Customer Support (the ☎ 0181 3028383 number) and got through on my second attempt. They reckon that the 1950's input connector is a standard 15-pin VGA configuration as follows:

Pin 1 – Red signal
Pin 2 – Green signal
Pin 3 – Blue signal
Pin 4 – Not used
Pin 5 – Ground
Pin 6 – Red ground
Pin 7 – Green ground
Pin 8 – Blue ground
Pin 9 – Not used
Pin 10 – Sync ground
Pin 11 – Not used
Pin 12 – Not used
Pin 13 – Horizontal sync
Pin 14 – Vertical sync
Pin 15 – Not used

I also asked if they knew of a suitable repair shop for your monitor, but they couldn't help on this one. **Gary**

LightWave, Trek and Bones



Software

I wonder if you could kindly help me with two LightWave-connected matters?

1. How do you produce a decent glowing effect, like the glowing warp nacelles on the NG Enterprise?

2. Could you run a 'Bones' tutorial for LightWave, as the object skeleton idea totally confuses me. I understand the concept of Parent – Child 1 – Child 2 objects, but how do Bones help me?

**Kier Darby
Purley-On-Thames**

The glowing nacelles of the NG Enterprise are actually produced with LightWave, but not LightWave as we know it, Jim. They are a feature of the new 4.0 release (low-cost upgrades will be available to registered LW 3.5 standalone owners) which was requested by

Amblin Imaging – who are currently working on Star Trek: Voyager – for the very purpose of making the glowing nacelles! So I guess the answer to your question is that if top-flight animators like Amblin can't easily do the nacelle glows without asking for a new feature, then it's unlikely that the rest of us can.

Of course glowing effects of a sort can be done with LightWave by making semi-transparent objects with high luminosity, but they don't produce quite the same effect as what you're asking about.

Now back to the medical bay for the other part of your question – Bones. First, let's consider a body and its skeleton. Think of the body as your 3D object, though unlike in real life a 3D object won't just collapse because it has no skeleton. In real life, the skeleton provides a framework to support the body and provide a flexibly jointed, though essentially rigid, structure on which the body can 'hang' whilst the skeleton is moved by muscle action. As the skeleton moves the skin of the body flexes and stretches to accommodate the movement of the skeleton, but it always retains a smooth surface.

Bones in LightWave allow you to construct a system of 'control rods' which can be thought of as analogous to the bones which make up a skeleton in that when they are moved or rotated, they affect the surface of the object to which they are attached, causing it to flex and stretch. Instead of using bones, you could make several versions of an object in a variety of sequential positions (for instance, several poses to produce a running man) and morph between each to portray a running sequence, but the provision of Bones makes this process much easier.

By adding Bones to an object, it is possible just to move the bones and the object itself will move. You should try the Bones tutorial in the LightWave manual (Page 47, Tutorials Layout) to get a basic idea of how they work. You'll have to do quite a lot of reading between the lines since it really isn't a great tutorial – the illustrations referred to are missing and the information given relies on the reader to fill in the missing bits.

To help you get started, make sure that the desklamp stem is modified so that it is made of triangular polygons and is subdivided once (do this in Modeller). If you can't find the

Installation trouble



Software

The Commodore Installer utility was created to help make installation of programs easy. Although many commercial products make use of the Installer, some PD releases contain Installer scripts, but don't include the Installer itself for reasons of size or distribution rights.

Installer scripts are easy to recognise; the icons show a picture of a disk and a wire going to a socket. The Installer itself is designed with three levels of users in mind: novice, intermediate and expert. Due to its flexibility and ease-of-use, it's worth getting a copy. The good news? Most PD libraries stock it! **David**



If you haven't got the Commodore Installer utility yet, get it now!

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Amstrad PCW8256/LQ3500 M/S	3.57	3.42	3.22	3.02
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BLACK	1off	2+	5+	10+
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BLACK	1off	2+	5+	10+
Star LC200	3.00	2.85	2.65	2.45
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desk lamp object, try looking in the Furniture drawer. You might also find that the BaseBone needs to have a larger rest length than is given in the tutorial.

What you really need to do is experiment, because the tutorial really isn't very good and doesn't give a very clear introduction to the true power of Bones at all. I think you're right – a Bones tutorial would be a good idea, but here isn't the place for it. Let's see what the Editor thinks. **Gary**

Display from DOpus



I have Directory Opus 4 and I'd like to set it up so that I can display images directly on to my OpalVision graphics card.

The trouble is that every time I try to sort it out I get confused and eventually give up. I know it can be done, but I just can't seem to figure it out. Can you tell me how?

J. Kennedy
Lytham St Annes

I can sympathise with your problems, Mr Kennedy, since I too found Directory Opus somewhat tricky to deal with at first. However, I persevered and nowadays I wouldn't be without it. As well as ordinary file management tasks I use it to display text and graphics, open files to my text editor, archive and unarchive LHA'd files and much more.

What you need to do is get DOpus to

recognise your files (whether text, .iff, 24-bit or whatever) and then get it to act on that file in the way you require.

The simplest way of doing this appears to be by setting up a Filetype which will determine what action is taken – for example, when a file name is double-clicked on. Here's how you could do it:

1. Open DOpus's Configuration window (use the pull-down menu or the small "C" box in the lower right-hand corner.

2. Click on the Filetypes box in the configuration window.

3. Next, click on the New box. A requester with a list of names will appear. Scroll down the list until you get to "Picture, IFF ILBM 24-bit" and select it. A new window with a lot of choices in it appears. This is where we define what happens when a 24-bit image is selected from within DOpus's selection windows.

4. Let's set up a DOpus filetype so that a 24-bit file will be displayed on the OpalVision when we double-click on its name. First, make sure that "Action Double-click" is highlighted in the uppermost box. Then move down and click on the New Entry box. Several boxes will become unhosted and an entry bar will turn coloured (red if your palette is set the same as mine, which isn't necessarily the case).

What you must do now is to tell DOpus how to react when it encounters a 24-bit image – in other words make it run another program to load the image to OpalVision and display it until we click the mouse to return to

DOpus. The program we need to use is called Show24, and you should find it in the Utilities section of your OpalVision drawer.

So, now click on the box marked "Command" until it reads AmigaDOS, since the Show24 program runs from AmigaDOS. If you know where your Show24 program is you can type the full path name for it into the text entry box to the right of the magnifying glass symbol, for example:

"DH4:VIDEO/OPALVISION/OPALUTILS/SHOW24"
(the case isn't important)

If you aren't sure where Show24 is, click the magnifying glass button and a requester will pop up for you to find and select Show24 from. Still in the text box, type a space after Show24, then either type in {f} or click on the curly brackets button to the right of the text box and select {f} from the requester.

Press the return key and the text will become an entry in the large centre box.

Now click the Okay button at bottom left, and press RightAmiga-S to save the new configuration file. Exit back to the main DOpus screen and double click on an 24-bit image you want to display.

If you've done everything right, there should be a short delay and then your image will appear in all its true colour glory. Click the mouse button and you return to DOpus. This method can be used to do all kinds of things. I also use it to display OpalVision animations, as well as GIF and IFF files. Now you can too. **Gary** ■

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AS52

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Workbench revision (written on the Workbench disk)

- | | | | |
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PCB revision (if known). Do not take your machine apart just to look for this! _____

Total memory fitted (see AVAIL in Shell for Workbench 1.3) _____

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Agnus chip (if known) _____

Extra drive #1 (3.5in/5.25in) as DF : Manufacturer _____

Extra drive #2 (3.5in/5.25in) as DF : Manufacturer _____

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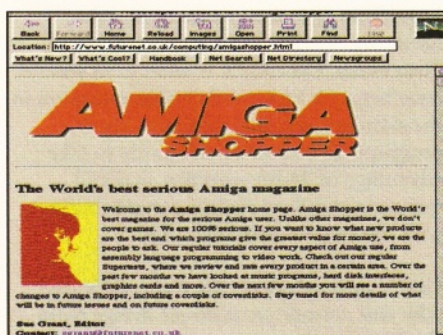
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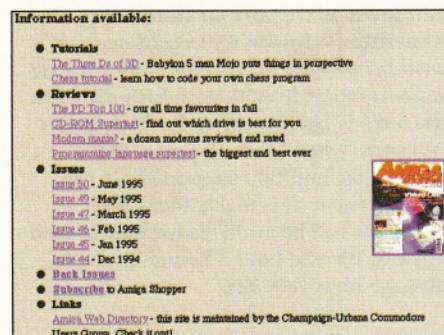
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Almathera conference on IRC

With the launch of Photogenics 1.2, the upgrade of 1.1a, Almathera were special guests at a recent IRC (Internet Relay Chat) conference. **Jason Compton** was there to report on what was said.

On March 22 1995, a moderated IRC conference was held with Almathera, makers of Photogenics, the new 24-bit paint/manipulation program. This report is made up of a collection of questions from various Internet conference guests and answers from the Almathera guys.

I'd like to say a special thanks to Martin Brooks and Jkay for their assistance in moderating the proceedings. Future IRC conferences are also being planned with MacroSystem Germany and Quasar Distribution expected to be my next guests.

OK, let's get underway. Almathera, would you like to introduce yourselves?

OK, on the panel we have: Paul Nolan (the original author of Photogenics), Jolyon Ralph (Technical Director, also programmer), Jason G. Doig (programmer, also author of Dogenstein 3D), THP (SteeV @ Almathera, Netsurfer and CD cutter) and Mark Tipper, our GFX man.

Can you give the home audience a brief overview of your company and products?

Almathera - Jolyon We've produced over 14 CD-ROMs for the Amiga, including CDPD1-4, and many others.

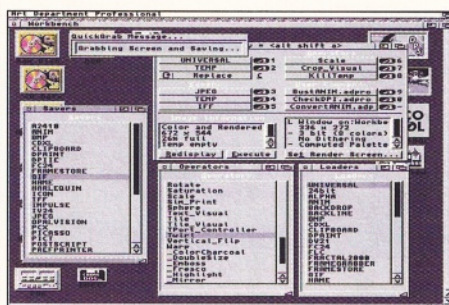
Photogenics is our first Amiga application and is a state-of-the-art, 24-bit paint/image manipulation package.

I've heard CyberGFX will be supported. Will there be support for Retina and EGS?

Almathera - Jolyon CyberGFX support is written. We have no current plans for EGS support (apart from that an EGS-displayer has already been written). Retina support will come when MacroSystems improve their 24-bit Intuition support so we can actually use it. It is highly likely that GyberGfx will be available for Retina soon anyway. We also have a Retina displayer now, which is very fast.

Is there a new version of Video Creator coming and is there an upgrade path?

Almathera - Jolyon A new version of VC is under development - there will be a cheap upgrade. NTSC is one of the new features.



Is Photogenics a match for ADPro? Find out in next month's (AS53) paint package Supertest.

"We're aiming for direct support of all the filetypes you'd ever encounter."

Do you see CyberGFX as being the RTG system of the Amiga's future?

Almathera Yes! CyberGFX is not only a card-independent system (allowing one product to work on a variety of different graphics cards) but it is actually faster (significantly in many cases) than the hardware-specific drivers provided with most cards. CyberGFX is what EGS should have been - a FAST and simple extension to the standard Amiga libraries to allow programs to be converted simply to take advantage of 24-bit graphics, and still maintain standard system compatibility with the same executable code.

I am confused about the CyberGFX and why you cannot get a direct driver from the Picasso II guys to support their 24-bit graphics card?

Almathera - Jolyon Photogenics is a standard Intuition program. The Amiga OS does not support running in more than 8-

bitplanes. CyberGFX patches the OS to allow this, which is much more than normal graphics board drivers do... It's also much faster than the normal Picasso drivers.

Will Photogenics compete with Art Department Pro and, if so, will there be an upgrade for ADPro users?

Almathera - Jolyon Good question.

Photogenics does not claim to do everything that ADPro can do (currently). Obviously, we're working on these features for future versions. Competitive upgrade from ADPro etc. is a possibility, although our program is extremely low-priced anyway.

Being producers of CD-ROMs with freeware etc., don't you think you are making money from other people's hard work?

Almathera - THP When we started doing CD-ROMs, the Fred Fish collection cost nearly £100 (over here) on CD. We brought it out at under £20. Buying PD/freeware on CD is still the cheapest way for most people to obtain this software in bulk. Doing these disks isn't a simple task of dumping a HD to a CD in general, unless the structure already exists (such as Aminet). Usually, we spend one or two months full-time doing each disk and production costs need to be met.

You have to remember that there are lots of people who do not have access to the internet and cannot get free software that way. Why should people pay £1-£3 for PD software on diskette?

Will you release more painter modes, savers, operators etc. as plug-ins? Also, how will you distribute these if you do?



Almathera brought out the Fred Fish collection on CD-ROM.

Almathera – Jolyon We are always writing new paintmodes, GIO loaders, plug-ins, etc. Some of these will be available freely over the Internet (ShowHiQHAM8 was uploaded to Aminet last week, but didn't appear for some reason.) Some will be available commercially (e.g. scanner drivers).

For the next version, will you use more of the disc space available for a bigger supply of QuadAnims, pictures, etc., or even some CD music-tracks for novices?

Almathera – Jolyon Yes, we've got two new tracks already and we'll be interested in anything anyone wants to contribute. More quads and images of course.

In Photogenics, is there some sort of module, possibly made by third parties?

Almathera – Jolyon The GIO format (graphic input/output) which covers loaders, savers, scanners, displays, printers, grabbers etc. is fully documented with example sourcecode. All developer files are freely available (supplied on disk 3 with every package).

Anyone interested in writing support for Photogenics should contact me on jralph@cix.compulink.co.uk. Support for plug-in type modules (effects), etc. will be available in a forthcoming version. (Free documentation again.)

Is there any hope at all of Photogenics supporting the MAGIC drivers developed by Nova Designs (ImageFX)? Also, would it be feasible to license your GIO format to other companies (like Nova)?

Almathera – Jolyon We looked at MAGIC – it's possible, but Photogenics works on totally different internal buffer formats (more memory-efficient), so it's not easy for us to use. Nobody has asked us to license GIO yet.

I am enjoying the plasma feature on Photogenics and I am trying to make a cycle where the plasma field can be a cycling background. Can this be done? Can small predetermined increments be made in cycle style, as in DPaint?

Almathera – Jason Make sure you clean your screen afterwards.

Almathera – Paul/Jolyon You can't do 24-bit colour-cycling. But doing a sequence with ShiftHue might do a similar effect.

CyberGraphics is excellent, but why can't you install it without being a computer scientist?

Almathera – Jolyon Firstly, CyberGFX is still under development. Yep, it's a pain to install at the moment, but that will be sorted.

Regarding the "additional loaders/savers" topic, I know a lot of folks who would love a PCHG loader/saver...

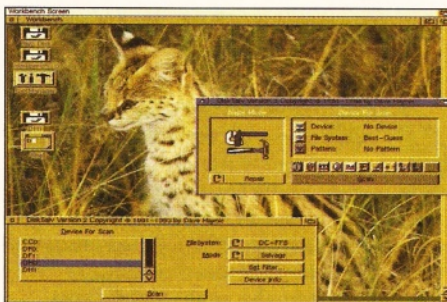
Almathera – Jolyon Ah! Well, I was thinking of doing PCHG (Palette Change Hires for those who don't know) support, but I didn't know if anyone would want it. I'll have another look at it and maybe soon I'll get a PCHG.gio written.

Will Photogenics be speeded up for the less fortunate people who only have a standard 1200?

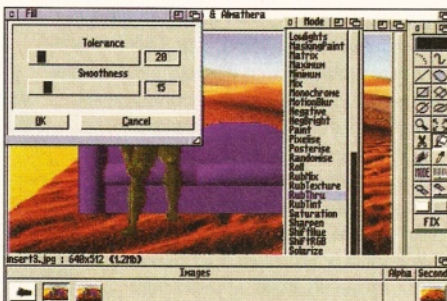
Almathera – Jolyon I'd like to improve the performance, but it's already doing so much work with 24-bit data that it's difficult to get it running any better.

You know how long I've been waiting for Video Creator NTSC. How is the upgrade coming? Both floppy and CD versions were considered...

Almathera – Jolyon Work is continuing on VC NTSC, a decision for a floppy version has not yet been made, but is highly likely.



DiskSalv 3.0 is a wonderful disk-doctoring program (which received a Star buy in AS51) that Almathera distributes.



Photogenics – what can be said about this wonderful program that you don't already know.

Is there any consideration or work being done on porting Photogenics to another platform?

We've got some plans for porting, but don't expect to see Photogenics on other platforms this year...

Out here in New York nobody has seen PG yet. Any chance of a demo? If so, where?

Almathera – Jolyon The March issue (issue 69) of Amiga Format carried a Coverdisk demo of Photogenics.

When we get a new demo version we'll upload that to Aminet. As for distribution – at the moment anyone can buy Photogenics directly from us (☎ 0181 683 6418, Fax 0181 689 8927). We ship international air-mail orders for £62 (which is around US\$100) directly. You can also order by E-mail if you want to (E-mail address found at the end).

Are you using or planning to use, the datatypes of 3.1?

Almathera – Jolyon, Jase, Paul We don't support datatypes because they are

currently limited to a maximum of 256 colours, so loading a JPEG (for example) would be much worse than using dedicated code. They're also very slow.

We're aiming for direct support for all the filetypes you'd ever encounter. Adding a 'datatype.gio' as a last resort if you've got some really strange format file that only datatypes supports is, of course, possible – we may well do that soon...

I use DODOShop on a Quadra and SGI. Photogenics on my A4000 screams in comparison.

1. Will you distribute 1.2 on CD-ROM?
2. Will you be developing layers, à la DoDOShop 3.0?

3. Will you be making a structured drawing companion to Photogenics, à la Frustrator (Illustrator)?

Almathera – Jolyon 1. Yes, possibly. If there's enough interest.

Almathera – Paul 2. I'm working on a multiple-positional, would-be-distortable layers-system which will kick ass!

Almathera – Jolyon 3. It's something I'd like to do (structured gfx package), but we don't have any firm plans for one.

The AF demo of PG seemed rather slow on my 50Mhz 1200/030 – is the full version any quicker?

Almathera – Jolyon I use a 50Mhz 1200/030. A lot of it was developed on that machine. Make sure you're running PAL (or NTSC) modes, *not* DblPal, DblNTSC, or Productivity modes; they have such severe bandwidth restrictions that any program running in 8-bit planes (e.g. Photogenics) has problems. Mode promotion – just say *no* kids!

Will you (or have you) branched out into the "oh-so-lucrative" world of PCs? Do you think it's possible to survive as an Amiga-only developer?

Almathera Yes, we're obviously looking to port to PCs eventually. I think we'll wait until PCs get a sensible OS first. (So, no work to do this year.)

Tell us about what other products you have? I read somewhere that you have a networking product?

Almathera – Jolyon We don't have our own networking products, but we are UK distributors for all of IAM products, including Envoy 2.0 and DiskSalv 3.0.

Is there a 040 FPU version of Photogenics with also a Picasso 24-bit saver?

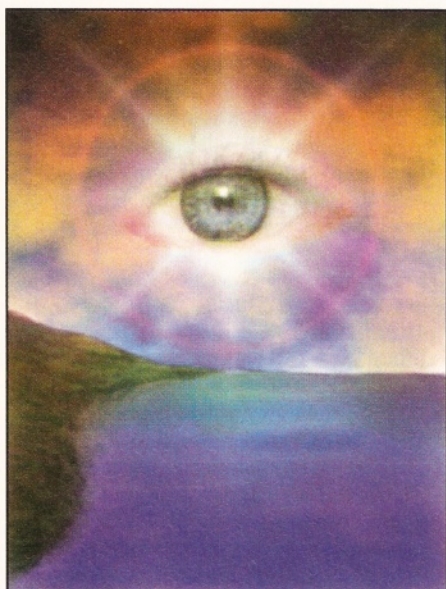
Almathera – Paul Nolan Photogenics uses fast integer mathematics for all operations, so there is no benefit at the moment for an FPU version. Future versions may come with FPU versions. Photogenics comes with Picasso 24-bit saver as standard.

That should about wrap it up.

Anyone can mail Almathera at jralph@cix.compulink.co.uk for questions about any of their products. ■

Photogenics Part 5

This month **Graeme Sandiford** uses *Photogenics' Composition* tool to combine two images to create a stunning final image.



This stunning image was created by Paul Nolan and illustrates what can be done with composition quite nicely.

Combining two or more images together is one of the most common and fun uses image processors are put to. Why fun? Well, by using the marvels of computer imagery you can create images that simply cannot exist in the real world – like placing a scanned image of your “dearest” sibling under a suspended car, or other heavy object.

At first I thought this would be a simple tutorial simply using Photogenics' Compose tool, but it turns out that there are actually several ways to go about this. That's one of the great things about Photogenics – it has so many tools that you can do the same thing in a variety of different ways.

We're going to do a composition in two ways: first by using the Compose tool and then with the Masking Paint and Rubthru Paint modes. Although this tutorial is not dedicated to using alpha channels, we'll be calling on their help once again – most operations can be performed more smoothly with them.

To start with, we are going to need two images; it's easier if they are the same size, but this is not essential. It helps if the area you want the image to show through is either black, or another solid colour, so that it can be selected and changed easily. Remember, if you are going to be using an alpha channel, the areas that are black will be transparent. The image that you wish to use as the foreground should be loaded or moved into the secondary image buffer.

Next, select Compose from the image menu – this will bring up a small requester and overlay the foreground image with the secondary image, a box and several dots. If the images are different, you can resize the background image using the dots (handles).

If you have an alpha channel, you can simply click on Alpha Compose and the Compose tool will use it as a template and combine the images for you. If you are not that fortunate, you can do it by hand. To do so, click on the Blend In/Out button, this will enable you to draw through with your right mouse button to reveal your background image.

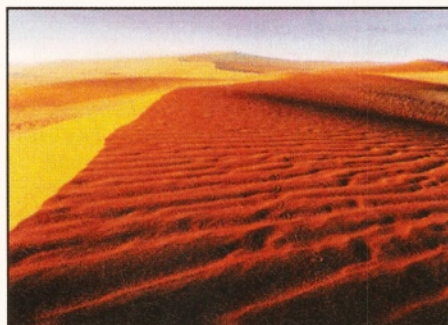
Now let's try using Rubthru mode, which gives you more options. First you'll have to swap the images around, then select the Rubthru mode. The easiest way of doing this is to use an alpha channel, if you have one, and then apply this mode to the whole screen – bingo. Easy, eh?

The next easiest way is, if you have a nice solid area of colour as mentioned at the beginning, to use the Flood tool. While still in Rubthru mode, select the Fill tool and click on the solid area. If it's not quite solid, then change the tool's tolerance level by clicking on the icon again.

The hardest way of using the Rubthru mode is to draw on the areas you want to “rub thru”. You may find it easier to draw in Masking Paint mode first, because it's slightly transparent, and then switch to Rubthru when you've selected the area – remember you can remove your paint with the right mouse button. ■



“Photogenics has so many **tools** that you can do the same thing in a variety of different ways.”



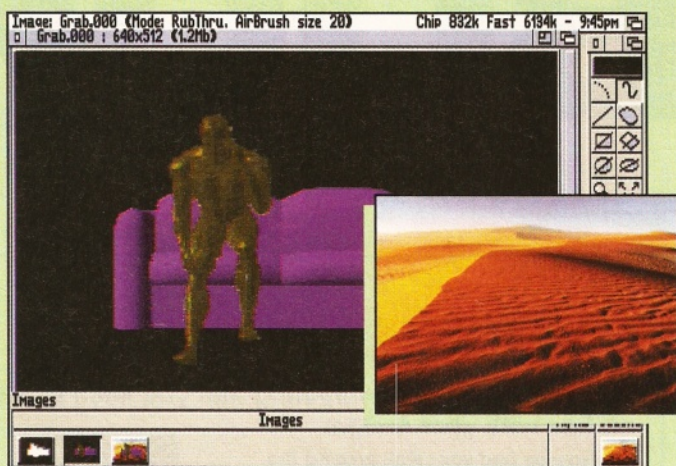
We'll be using Photogenics' Composition tool to combine a rendered image with a scanned one.

More tutorials

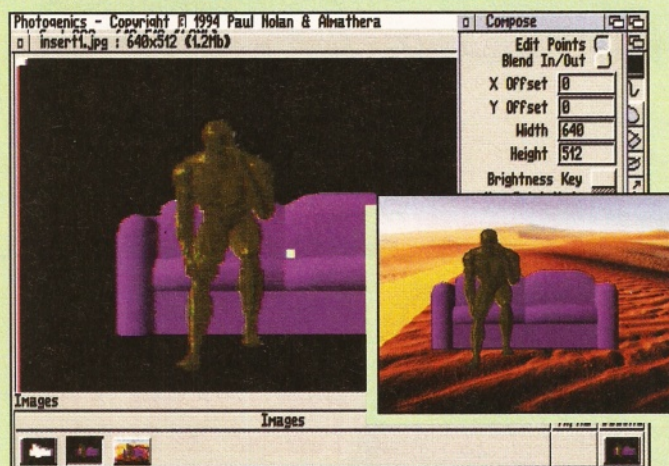
This is the fifth of seven tutorials where we'll be covering most of Photogenics' features. Some of the techniques that we will discuss in the tutorials listed below are equally applicable to other similar packages.

1. Alpha channels
2. Text effects
3. Filter effects (part 1)
4. Filter effects (part 2)
5. Image composition
6. Image retouching
7. Drawing techniques

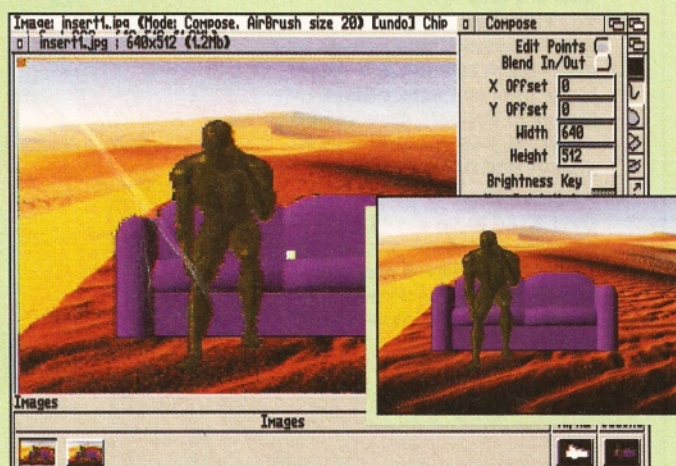
Combining two or more images



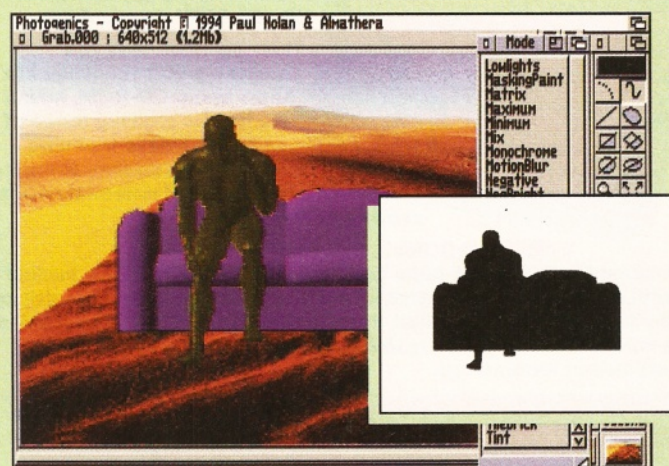
1 First load two images, the image that is to serve as the foreground should be loaded into the secondary buffer. If you have an alpha channel, load it in too.



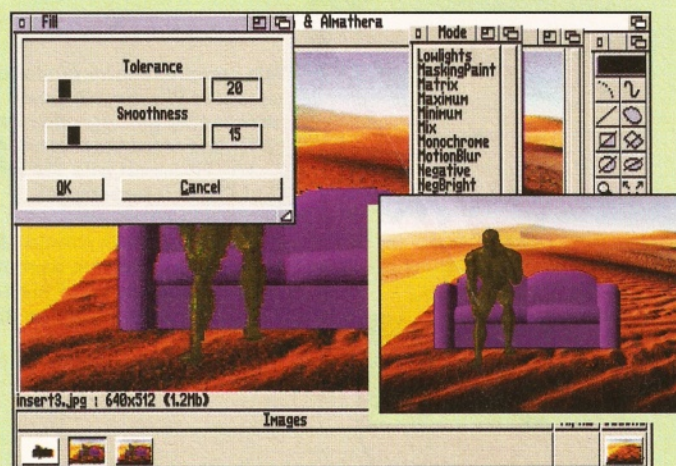
2 Select Compose from the image menu. If necessary, move the handles that appear to resize your image, or enter the figures in the width and height gadgets.



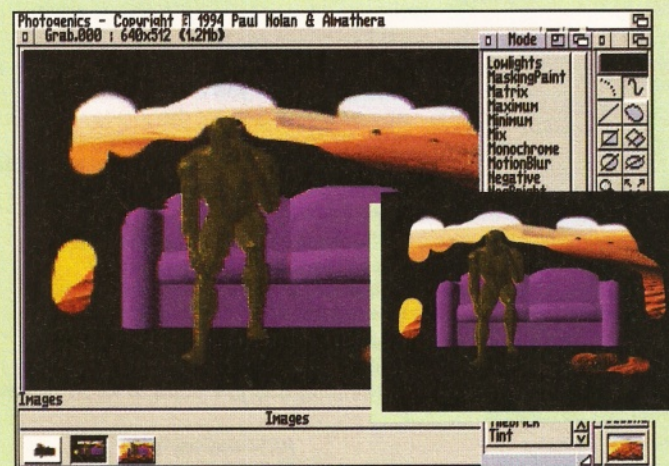
3 Finally, click on Alpha Compose if you have an alpha channel and then on OK. If you do not have an alpha channel, then draw "through" the image with your right mouse button.



4 Alternatively, load your background image to the secondary buffer and your foreground alpha channel. Then apply the Rubthru mode to the whole image.



5 If you have no alpha, but do have a solid area to show through, then use the Fill tool in Rubthru mode - if necessary change the tolerance setting.

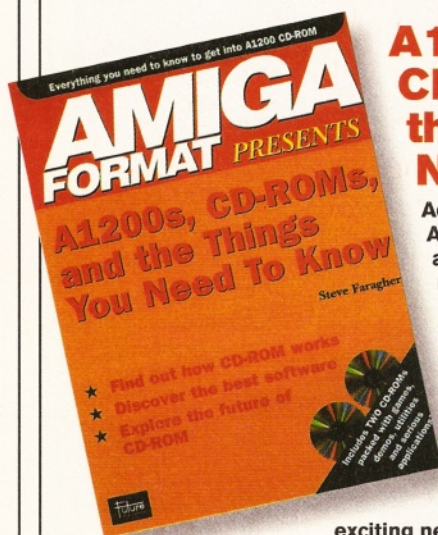


6 Finally, if the worst comes to the worst, you'll have to draw through to your background using the Freehand tool - groan! However, it helps if you use the Masking Paint mode first.

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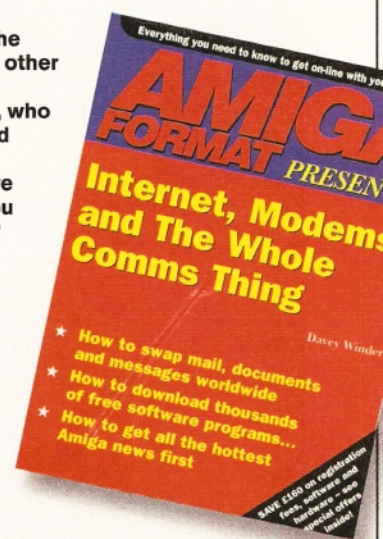
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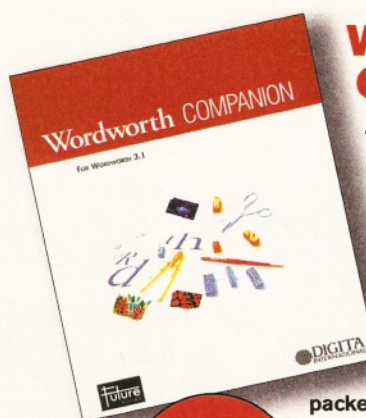
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Assembler The Prequel

Direct hardware programming, or metal bashing as it is known, comes in many flavours ranging from multi-layer cakes with fancy decorations, down to sewerage. **Toby Simpson** explains.

I have always promised that one day I'll talk about hardware registers and all those exciting bits that do naughty things with your computer in some intricate manner. Well, here it is.

During the past few months, we've introduced Assembly language slowly as a tool to get things done. Recently, we've worked with the Amiga Operating System to open windows, and show information on the screen.

With 99.999 per cent of all the programming jobs you'll ever want to do, this is the right way to do things. The Operating System is there to help you; to take as much of the actual work off your hands as possible. If you co-operate with it, then everything else will be co-operating with you.

Free of charge, you get a whole bunch of other advantages which come with a multi-tasking Operating System capable of sending information between tasks. I'm sure everyone who does anything remotely serious on their Amiga will agree.

However, and I must stress it is a very, very small however, there are some times, rarely, when a more direct approach is required. This sort of nasty arrives when the Operating System simply can't do what you are asking of it. If you happen to know that the computer is capable of the sort of results you

require, there is a slight case for by-passing the Operating System entirely and getting right in there yourself, guns a-blazing.

It has taken me a lot of waffle to get to this point. The reason I lecture on about Operating Systems is that you get into an entirely different kettle of ball-games when you go straight to the hardware. One of these issues is compatibility. Should the machine be upgraded, your direct access methods could be crippled partially, not even work, or, even worse, crash the computer.

This sort of gung-ho programming caused massive problems when Workbench 2 first appeared and, then again, when the AGA chipset materialised. This mostly effected games and demos. Funnily enough, though, almost *all* of these compatibility problems could have been avoided with a little care and attention.

Programming the hardware directly is a dangerous thing to do – make no mistakes. In one sweeping move you can crash your Amiga, corrupt your hard drive and flush the memory of your computer. You immediately throw away the firewall which the Operating System puts up against particularly stupid choices, particularly with display issues. It requires care, an abnormal amount of patience and a desire to remember to back up your source code more frequently than you otherwise might.

Having said all of this, though, there is one more thing about programming the hardware directly. It *is* fun. A whole strapping bundle of fun, in fact, and one which we are going to dive into for the next couple of months.

A register or two

We understand registers, don't we? Registers are something we introduced back in the first exciting edition of this course.

The 68000 Chip has a whole load of them – eight data, eight address and some other goodies as well.

Other Chips can have registers also, to control their operation. The catch is that since they are not built into the CPU, like D0 and its friends, we can't access them so easily.

Well, actually, we can. These registers map to physical memory locations, just like a normal byte of memory. And, again, just like a normal byte of memory we can read from it and write to it. Unlike normal memory, however, the effect of you doing this can be quite dramatic.

Some registers are read-only, which means that writing to them has no effect. As well as full read/write registers, there are write-only ones and others where the individual bits have different properties.

The Amiga contains a whole host of weird and wonderful Chips with registers in them and you can have fun poking around with them all. Let's crack off with a little bad programming:

```
move.w      #-1,d0
moveq.w     #$00,d1
loop:       move.w     d1,$dff180
addq.w      #$01,d1
dbra        d0,loop
rts
```

This is bad programming on truly biblical proportions, but it does get us started. There is nothing here that we have not used before; all standard, simple instructions. Indeed, the program *should* do nothing, because, after all, all it does is write an increasing number to the memory location \$dff180, 65556 times and exit.

Type this into Devpac, assemble it and run it. Wow! Colours everywhere! And you've probably not been drinking either. Quite how long this program will last depends on the CPU you have. I get about half a second of weird colours before the program stops on my

```
CygnusEd Professional V3.5 Copyright © 1987-1993 CygnusSoft Software
Development:Extractors/Extractors4_131.asm 1 line 2272 col 36
Initialises the display so that it is able to receive a 256
colour picture frame.
No inputs. No outputs. Registers on exit undefined.
XXXXXX
SetupGoodDisp: lea      _CUSTOM,a5
----- Disable control panel possible refresh ....
clr.w          ctrl_finer
clr.b          ctrl_change
:
:
: Set up H/W registers for display ...
move.w         $50211,bplcon0(a5)      ; Eight bitplanes (256) cols.
move.w         $50000,bplcon1(a5)      ; Horizontal scrolls
move.w         $50022,bplcon4(a5)      ; Sprite banks.
move.w         $5000f,fnmode(a5)       ; 4x bandwidth.
move.w         $50000,bplmod(a5)
move.w         $50000,bpl2_od(a5)      ; Modulos
move.w         disp_D1HSTRT,d1ustrt(a5)
move.w         disp_D1HSTOP,d1ustop(a5)
move.w         $50030,ddfstrt(a5)
move.w         $50030,ddfstop(a5)
move.w         $500b0,ddfstop(a5)
move.l         Budu_PlaneVisual,Plane_Bytes
clr.l          Display_Offset
clr.w          Horiz_Offset
move.w         Horiz_Offset,cop_BPLCON1 ; Display offsets
jsr            Init_Good
:
:
: Correct copper list end ....
lea            clist_Normal,a0
lea            Insert_List,a1
lea            Bc_list_Normal_SIZEOF-1,d0
SGD_CopyCopper: move.b     (a0)+(a1)+
dbra           d0,SGD_CopyCopper      ; Copy copper ending.
lea            CopperList,a0
move.l         a0,cop1lc(a5)
move.w         $500,copjnp1(a5)        ; Force re-start of copper.
rts
ENDP
XXXXXX
```

The Assembler routine used in the CD32 game Extractors to prepare for a 256-colour screen.

machine. So, what are we doing here? \$dff180 is a special memory location. It is called COLOR00. It is a 16-bit, write-only register laid out like this:

O R G B

Each character represents 4 bits. The least significant group is the Blue value for colour 0. Next along is the green, then the red. The most significant bits are meaningless currently and should be set to 0.

On a standard ECS Amiga, such as the A500 or A3000, this gives us a 12-bit colour system. 4 bits for each of the Red, Green and Blue content of a colour (0 to 15). Following from this, we can conclude that there are 12 bits of resolution, giving us a total of 4,096 possible combinations. There are 32 COLOR registers in the Amiga, running from \$dff180 upwards.

Congratulations, you've just programmed the Amiga hardware directly. Gripping stuff, eh? Unfortunately, it is a complex subject and this month we'll only be able to introduce the basic concepts behind it. Next month, we'll knock up a program to display one of those famous pretty copper bars on the screen. (If you don't know what a copper bar is, don't worry. It just looks pretty!)

What it is all about

Direct hardware programming, or metal bashing as it is often known, comes in a few flavours ranging from multi-layer cakes with expensive decorations, down to sewerage. The trick is to avoid the latter. The degree in which you bypass the Operating System is very important. Early hardware programmers took over completely and it is this approach which leads to incompatibility and, what is more, it is totally unnecessary.

If you've played with the hardware before, you'll be familiar with two function calls in the exec.library, Forbid() and Permit(). These two disable and then re-enable multi-tasking respectively. You tend to find one at the beginning and one at the end. You don't need these at all.

There is no reason why you shouldn't get the performance and not kill the Operating System and you get benefits heaped in free. For example, you can still use dos.library to read files, which means your program will run off a hard disk. It is this which we will work on – getting cool effects and co-operating with the Operating System as best as we can.

What we'll do now is go through some of the basic concepts involved and then dive straight in. Firstly, we'll look at DMA and Interrupts. These are key-issues when you work with any computer system, not just the Amiga. PC-owners out there will be aware of the nightmare involved in setting up new sound cards with DMA conflicts, interrupt hassles and so forth.

The Amiga takes this problem away and shields users from the complexities of it. If you are programming the hardware directly, then you will need to use them. Then we'll move on to the whizzy gadgetry which makes up the Amiga

This is where we say goodbye to the Amiga screen display and plug in our own. Note the Operating System calls to graphics.library at the top of the listing. We are asking the Amiga OS to remove its display before we walk all over the hardware registers. We're polite in that way.

```
CygnusEd Professional V3.5 Copyright © 1987-1993 CygnusSoft Software
Development: Extractors/Extractors4_131.asm      line 2150 col 37

Graphics Routines
=====
Setup_Display:  suba.l  a1,a1
                GRa    LoadView
                GRa    WaitTof
                GRa    WaitTof
                jsr     InitGood          ; Clear intuition Display.
                lea     CUSTOM,a5        ; Setup display pointers.
                move.w  #5007ff,dmacon(a5)
                jsr     SetupGoodDisp    ; Halt DMA.
                move.w  #60,Sprite_X_Adjust ; Setup initial registers

; ---- ID Display type and set up accordingly ----
                cmp.b   #n_prefs_VIDEO
                beq.s   SD_SetNTSC
                cmp.b   #e_prefs_VIDEO
                bne.s   SD_SetPAL
                move.w  #50000,dff1dc
                move.w  #52c81,disp_DIMSTRT
                move.w  #5f4c1,disp_DIMSTOP ; NTSC Window.
                move.w  #5e001,gamc_CopLine
                move.w  #5e101,menu_CopperLine
                move.w  #50101,normat_CopLine ; NTSC Copper trigger line.
                move.w  #528-7,Sprite_Y_Adjust
                move.w  #528,Top_Of_Display
                bra.s   SD_DoneVideo
SD_SetPAL:      move.w  #54001,disp_DIMSTRT
                move.w  #510c1,disp_DIMSTOP ; PAL window.
                move.w  #5f401,gamc_CopLine ; .. (Adjusted from NTSC)
                move.w  #5f401,menu_CopperLine
                move.w  #51001,normat_CopLine ; PAL Copper trigger line.
                move.w  #544-7,Sprite_Y_Adjust
                move.w  #544,Top_Of_Display

; ---- Clear all sprites ----
SD_DoneVideo:   move.l  a0,a0
                move.l  a0,d0
                swap    d0
                moveq   #507,d2
                lea     SpriteList,a0
                move.w  #544,Top_Of_Display

SD_ClearSprites: move.w  d0,d0(a0)
```

custom Chips, including the blitter, copper and display hardware. Next month, we'll look at the audio stuff and play a couple of samples.

Direct Memory Access

You've almost certainly heard of DMA and have a fair idea of what it does. For the un-initiated, DMA stands for Direct Memory Access. This is where other devices inside your computer, i.e. other Chips, can access your main memory (RAM) themselves, without the microprocessor interfering. DMA makes for blindingly fast hard disk controllers, because your processor can run at full whack and the hard disk controller spurts information directly into memory.

Unbeknownst to you, however, even when you sit staring at a 256-colour, AGA, 640x512 Workbench screen, slightly more than 16Mb of information are moving directly from your computers memory via DMA, through a whole bundle of custom Chips, to generate the screen display you are looking at.

The Amiga custom Chips use DMA extensively for the operations they perform. DMA is used for the floppy disk hardware, audio, blitter, copper and screen hardware. When accessing the Amiga hardware directly, you have total control over DMA. In one instruction you can disable the whole lot, blanking out the screen, cutting off the audio, and rendering your floppy drives inactive.

It is this sheer power you have that leads to disasters. Assembly language programmers are more likely to have more hideous crashes than those of higher level languages (such as 'C') just by the low level nature of the language. When you talk to the hardware directly, you expand this. You can easily accidentally program this hardware to blank out a 128K chunk of your memory faster than your TV can display one single scan-line of information.

Interrupts

Interrupts are just that. Interruptions. One minute you are doing one thing and someone taps you on the shoulder and asks you to do something else for a while. There are regular interrupts, such as coffee breaks (well, they are for me anyway) and ones which arrive at unpredictable

times like the telephone ringing. And, of course, there are those which you can choose to ignore, and ones you can't; a call of nature, for example, or a great need to go to the pub for a spot of lunch and a pint.

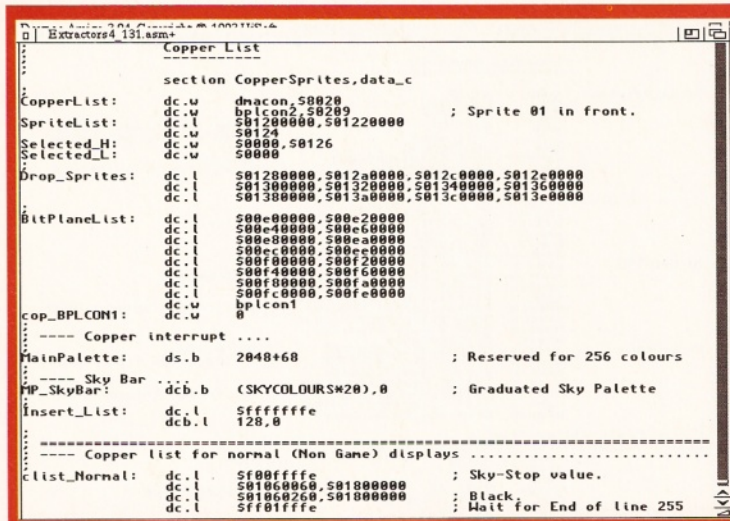
Interrupts in computers are just like this. With normal programming on the Amiga (if there is such a thing as normal), you rarely need to access interrupts directly. When you move into the realms of games, demos and other hardware programming, suddenly they take on a whole new meaning and become vital.

The 68000 Chip supports two types of interrupts: maskable and non-maskable. Maskable interrupts can be disabled; you can choose to ignore them. Non-maskable are not ignorable. There are seven levels of priority in 68000 interrupts; a higher priority interrupt can interrupt a lower level one, but not vice-versa. Nothing can interrupt, or prevent, a non-maskable interrupt from being processed.

In a boring, old standard 68000 Chip, seven interrupts can be triggered; one for each of the seven interrupts, the latter being the non-maskable.

When one of these interrupts occurs, unless interrupts

“It is this sheer power you have that leads to disasters.”



The start of a copper list for a computer game. It is possible to program the copper in Assembly language, but it is sufficiently simple for most people to be able to program it directly in this manner.

are disabled in some manner, the 68000 Chip will stop executing the current program and save all registers to the stack. It then goes into supervisor mode and runs one of seven programs depending on the interrupt.

The addresses of these programs are stored in the long words from \$64 to \$7c. The appropriate address is read out and called. The conventional way of getting control of interrupts is to write into these memory locations. This is bad. It is bad because the Amiga subdivides each of these interrupts up (to give 15 in total).

The third level of 68000 interrupt, for example (called Level 3), can be triggered for one of three reasons: the graphics co-processor (copper) has caused it; the vertical blanking period has just begun (this is when the electron beam on your monitor goes from the bottom right back up to the top left – on a TV this happens 50 times a second); or because the blitter Chip (see later) has finished an operation.

Normally, the Operating System handles all of its requirements for these interrupts. You can ask the `exec.library` for usage of an interrupt. This is the *right* way of doing it and you suffer bugger all (excuse my French) in the way of performance loss for doing it. It is not clever to write to these vectors directly. Not only do you achieve nothing, but you cut off the life-support to some very important system tasks, such as those which ensure your hard disk works okay.

To harp on a little longer, if you have a 68010 Chip or above, all these interrupt vectors (called autovectors) can actually move around. Nasty, eh? A whole new register, called VBR (Vector Base Register) dictates where these, and numerous other 68000 vectors, sit in memory.

The Amiga OS people wanted to move these vectors into Fast RAM with Kickstart 2.04. They couldn't, because 95 per cent of games stopped working simply because they didn't take the VBR into account. Allocate your interrupts through the OS and this won't be a problem to you. Program defensively; it pays off.

Amiga Video Hardware

The Amiga Video Hardware is a complex beast. Unfortunately, there is not enough space in this magazine to explain it all, so we'll pile through it at great speed and then explain more as we need it when we start writing some direct hardware access programs next month.

OK, brains on standby. When you look at your screen, you look at a cathode ray tube. This ancient piece of technology basically involves a beam of electrons scanning from left to right, top to bottom over a glass screen coated in phosphor which glows when hit with electrons. By turning this beam on and off rapidly, you can draw pictures on the glass screen. This procedure has remained unchanged for nearly 50 years.

On a conventional TV, there are 625 scan-lines. The electron beam starts at the top, goes across one line and then sweeps back to the start of the next line. This sweep is called the horizontal blanking gap. When the beam gets to the bottom right, it goes all the way back up to the top and starts again. This is called the vertical blanking gap and on a TV it happens 50 times a second.

Imagine this; your Workbench screen is 640 pixels across, 256 lines down and is two colours – black and white. If you view this on a TV, this screen will be refreshed 50 times a second in order to keep the image stable. In order to store 640 pixels, in two colours, you require 640 bits of memory. Each bit represents a pixel, either on or off for the two colours. 0 is black, 1 is white. 640 bits is 80 bytes. 256 lines means you need 256x80 bytes, or 20,480 bytes of memory to store the display.

A single sheet of this kind on the Amiga is called a bitplane. When you overlay two bitplanes over the top of each other, you suddenly get four choices of colour, because for every given pixel, there is another pixel for the same position in the other bitplane. By the power of binary, this gives us four combinations: 00, 01, 10 and 11.

Three bitplanes gives eight combinations, four gives 16. The AGA chipset allows eight bitplanes, giving a whopping 256 colours on a screen. However, work it out. One bitplane is

20,480 bytes – eight is over 160K. If your Workbench screen is 640x512, in 256 colours, that is over 320K of memory used just to store the picture you are looking at. If you open a few programs, each having a screen, it is easy to see how a few megabytes can vanish in seconds, without you typing one letter into a word processor.

On the Amiga, all data which is accessed by the video hardware, such as bitplanes, has to be in Chip RAM. You don't get many 640x512 256-colour screens in 2Mb of Chip RAM, as you may have discovered! The Amiga custom Chips have registers which point to where the bitplanes are stored in Chip RAM. You have to ensure that these are re-set to point to the start of the bitplanes for the beginning of each frame.

The more alert amongst you may be thinking "Hey, let's use that vertical blanking interrupt". Full marks. You could! You could write a small routine which hung off the Amiga vertical blanking interrupt. This happens as the electron beam is scanning back up, ready for another sweep, so it is an ideal time to re-load the bitplane registers. This would work, but the Amiga custom Chips contain a gadget which wipes this out as a problem.

The copper co-processor is a small computer inside your computer. The copper is a microprocessor, just like the 68000. Unlike the 68000 Chip, however, which has more instructions than you can shake a stick at, the Copper has only three.

At the start of every new frame, the copper program (called a copper list) is run automatically. Copper lists can do three things. They can wait for the start of any measurable position of the electron beam and they can move information into custom Chip registers. You can write a copper program, for example, which refreshed your bitplane pointers every frame.

Remember that \$dff180 program we used earlier? You can write a copper list which waits for the start of each individual scan-line on your display and then changed the colour slightly. The result would be a stable pattern of colours.

These can be animated to produce stunning effects, commonly used in games and demos. Since the copper can access any register, you can actually perform effects like changing the screen resolution from 320 pixels on a line to 1,280 pixels on a line whenever you feel like it.

Games occasionally use this to give high-resolution control panels at the base of the screen with a lower resolution play area above. The speed of the copper allows you to change 32 colours of a palette every scan-line. (That is 8,192 colours displayed on a two-colour screen.)

Bored?

That's enough talk. Money-where-mouth-is time. We've looked at the basic concepts this month. Next time around we'll launch off by writing our own display-routine, demonstrating smooth screen scrolling, obscene amounts of colours and the odd sound effect. Hey, it's the summer season. I'll even throw in a few cheery sound-effects on to the Coverdisk. ■

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Bureau 13	19.99	19.99	Evil 5	10.99		Kick Off 3 Euro Challenge 8	6.99	19.99	Pirball Fantasies	19.99	24.99	Striker	8.99	19.99	World of Golf	17.99								
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Cadaver Pay Off	6.99		Evil 17	10.99		Kick Off 3 Euro Challenge 20	6.99	19.99	Pirball Fantasies	19.99	24.99	Striker	8.99	19.99	World of Golf	17.99								
Canon Fodder 2	12.99	19.99	Evil 18	10.99		Kick Off 3 Euro Challenge 21	6.99	19.99	Pirball Fantasies	19.99	24.99	Striker	8.99	19.99	World of Golf	17.99								
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DICE

Part 4

"If you recognise that you will make errors, then you'll be better at both preventing them, solving them and learning from them." **Toby Simpson** talks about debugging.

Debugging is a pain. If computers are so amazingly clever, why can't they do it themselves? The problem arises from the fact that computers have an unfortunate weak link. That is the humans that use them. Computers don't make mistakes when operated under correct environmental conditions (i.e. it's not too hot or cold). The errors they *do* make are all down to errors made by humans, either when they designed the machine, or programmed it.

We are fallible. We make mistakes. Being aware of this solves half of the problem immediately. If you recognise that you will make errors, then you'll be better at both preventing them, solving them and learning from them. This amazing lecture in human nature isn't all just because I feel like it, it has a programming link. Bugs, of course. And that is where we left DICE last month.

Debugging, however, is still a pain. The trick is to make it as painless as you can, which you can do in a couple of ways. The first way is to program defensively in the first place. Take the minimum of risks, document everything, think before you type and use a little care. The second is to use the right tool to help you find a problem if it should occur.

There are numerous tools out there which can assist you in tracking down problems. One of these beauties is the Enforcer/FindHit combination (see box-out). Since this is after all a DICE tutorial, we shall be having a slightly closer look at the DICE debugger, using our Finder application as source material. The latest version, together with a compiled executable, can be found on this month's Coverdisk.

The DICE debugger is called DD. We introduced it last month and showed how we can step through our programs a line at a time looking at exactly what is happening. Should we want to, we can get right down to the actual Assembly language which the compiler generates.

As I said last time around, DD certainly isn't going to win any awards for best debugger of the year. It is slow and it is easy to get into trouble with it. Being aware of the problems allows you to use the program within its limits to assist you in finding problems.

Enforcer and FindHit – a match made in Heaven

If you own an A3000, or have an accelerator of some kind in your Amiga, you may have an MMU. MMU stands for Memory Management Unit and it does just that. From a programming point of view, it allows you to know when certain areas of memory are accessed.

Enforcer is a tool which traps illegal memory accesses by your program. You have to own an MMU to use it, but it is out there free on most BBSs, the Internet and from all good PD libraries. When something goes wrong, an "Enforcer Hit" is generated, giving

lots of useful information as to what caused the illegal memory access. One of these bits of info tells us which task in the Amiga was responsible for the crime and where in that program it happened.

Enter FindHit. If you compile your program with loads of debug information, FindHit can tell you exactly which line in your original source file caused the hit! You just tell FindHit the name of the executable and the information provided to you by Enforcer, and away you go. Invaluable!

If you can even find one bug with it which would otherwise have subjected you to days of painstaking manual work, then it is worth the price of getting to know it.

Breakpoints

Breakpoints are an extremely important debugging concept. They allow you to run the program until a given point and then simply stop. Control then returns to the debugger. This little operation allows us to do some really neat things:

- Stop program execution shortly before we know it is going to crash. You can then check the values of certain variables and perhaps single-step through the dodgy bits.
- Stop program execution in key routines, or at points in the program at which you want to check certain values.

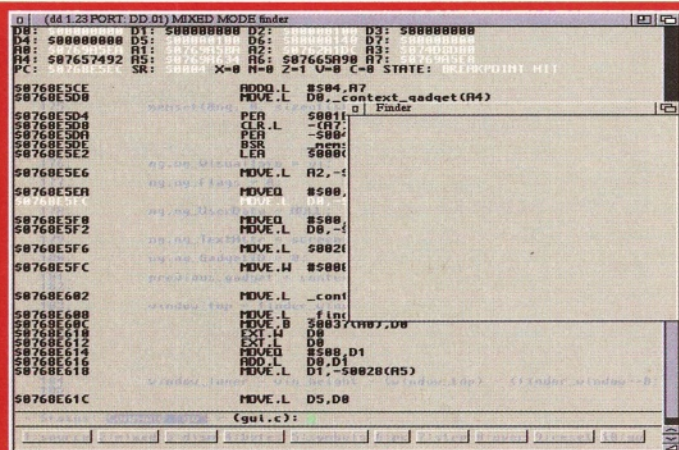
Breakpoints are simplicity themselves to set

up using DD. One thing worth noting first is that DD is command-driven. This means that it works like the Shell in that you type in a command, press enter and it is executed. DD's menus can therefore be slightly misleading in that many of them are just hot keys to enter information into the command line.

If you've accidentally clicked all over the screen, this command line can contain a fair quantity of rubbish. One menu selection and you may set up 20 breakpoints without realising it. The cool thing is that you can double-click on any command in the source window and set it as a breakpoint. Breakpoints are underlined on the screen to show them (see picture overleaf).

There are two ways of running DD. The way we introduced last month was through the VMake (Visual Make) program, by double-clicking on our VMake icon and then selecting Debug. The other method is from the Shell. If

Using a breakpoint to stop the Finder whilst we are setting up gadgets.



77

you open a Shell and use the 'cd' command to move to the directory where your Finder source code and program are typing...

```
dd finder
```

...will also run the debugger. Now it is time to run the debugger. You will need to make sure that the compiler generates lots of additional information with the program for the debugger to be useful. This can be done by selecting Options off the Edit menu of VMake. Turn the 'Debug Level' cycle gadget round until it shows 'Full'.

Let us imagine that there was a bug in the gadget creation code and that buttons were appearing in the wrong place. The easiest thing to do is to set a breakpoint just before the gadgets are created and then when the breakpoint happens, single-step through from there, watching what is going on.

Scroll down using the slider to the line in 'gui.c' which reads:

```
context_gadget =
CreateContext(&first_gadget);
```

Double-click on the line number at the start of the line. All being well, underlines should show you where the breakpoint is now. You can view your breakpoints by selecting "Breakpoints" from the "Breakpoints" menu. Pressing on the '1:source' button will return you to the source-code you were looking at previously.

Now our breakpoint is set, press on the '10:go' button at the bottom of the DD window, and the program will start. The standard Finder window will open and then stop there before gadgets are added. Control is now back firmly in the debugger's court. Pressing on the '6:pc' button moves the source window to where the current line of code being executed is. Since we've stopped at a breakpoint, this is where we'll end up. We can now look at the code and memory involved and either click on the '9:go' button to resume, or continue single-stepping from here.

We've demonstrated a once-off breakpoint – you use it to get somewhere quick. You can also use regular breakpoints – those inside a routine which is called more than once. This sort of breakpoint would have been handy when I was debugging the recursive File Finder routine in 'search.c'.

Getting the full version of DICE

On the March Coverdisk we gave away a special version of DICE 3. Obviously the authors of DICE wouldn't make much money if we gave away the whole product, so it was especially cut down. It has the following limitations:

- You can't use bitfields or floating point.
 - The maximum executable program size is 40K.
 - Each source file can only have up to four functions in it.
 - You can't use this version of DICE to generate commercial applications, or for work purposes. It is for the private home usage by Amiga Shopper readers only.
- If you're getting into this now and fancy the entire product, together with a 450 page

manual (which is hard reading and leaves a little to be desired), at a fantastic £30 off the retail price, then you can obtain it from the Amiga Shopper mail order on page 34.

You can also get it from the UK distributors, Fourth Level Developments:

Fourth Level Developments, 31, Ashley Hill, Montpellier, Bristol, BS6 5JA, England
Tel: 0117 955 8225 Fax: 0117 955 9157

E-Mail: dicecsales@flevel.demon.co.uk (For sales)
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You'll need a full version to make use of the revision control system and, also, without it you are limited to four functions per file, which could result in some cut 'n' pasting with the Finder application!

Trying it out

With any debugger you have to get used to the general basics. Spend a fair while using DD with the Finder source since, to the best of our knowledge, there are no serious bugs in it, so you should be able to experiment without worry.

In the meanwhile, let's introduce a bug and then find it quickly. Load the Finder project into VMake. Make a small change to line 45 of 'event.c'. Change it from...

```
window_signal = 1L << finder_window->UserPort->mp_SigBit;
```

...to:

```
window_signal = 10L << finder_window->UserPort->mp_SigBit;
```

Easy mistake to make. We've typed 10L instead of 1L. The result of this will be that the event handler isn't going to work properly because the window signal mask will be incorrect. Funny thing, though, is that CTRL-C will still work and sometimes ARExx works. Odd bug! A job for DD.

Load up the debugger by selecting Debug from the Run menu. Then simply hold Shift down and press the down arrow to go through the source until you get to 'event.c'. Double-click on line 61 to add a breakpoint at the Wait() line.

Now we're cooking. Press the 'go' button and wait till the breakpoint is reached. Control now returns to the debugger. We are now able to either single-step through and see

what happens, or look at a few of the symbols and see what they contain.

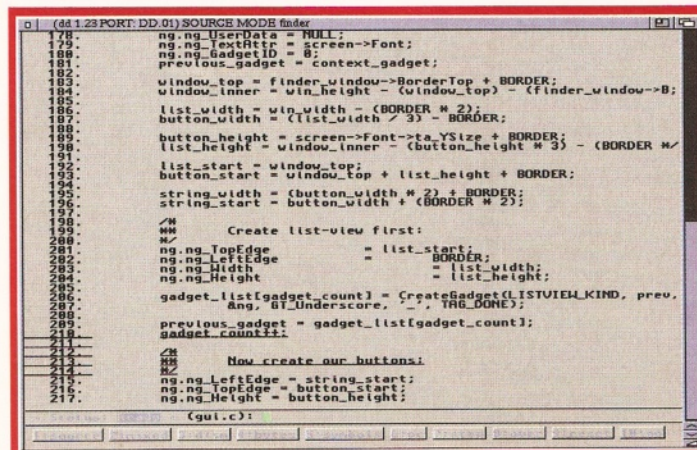
We know that the signal mask for the window should be a binary 1, shifted left a set number of times to make a proper signal mask for Wait(). A brief check of both the number which is coming out of the window structure and the result after the calculation will reveal that the answer is wrong. This line therefore contains the error.

The problem with debugging is that you need to know roughly where the problem is in order to stand a chance of finding it. DD is not magic; you can't run it and expect it to do the work for you. In the case of the above bug, we knew that suddenly all window-clicks had stopped working and yet CTRL-C continued. This indicated something wrong with the window-code in the event handler.

With something this obvious, a brief check of the source in that area should reveal the problem. But at least we knew the approximate whereabouts of the error, which obviously helped with the speed of finding it and our choice of initial breakpoint and symbol examining.

That's enough debugging for anyone to stomach in one month. Next time around we'll finish off a few loose ends and amaze and astonish you with just how unreadable C programs can be, including one incredible several-line program which produces the entire "12 days of Christmas" rhyme seemingly from nowhere.

Stay tuned – you know it makes sense! ■



Setting a breakpoint in the DICE debugger by double-clicking on a command.

On the Coverdisk



This month, the Coverdisk contains the full Finder application. All the source files are provided, along with the VMake configuration file. Current users of DICE can simply double-click

on this to get started. For those of you who are interested in seeing what we've been up to for the last six months or so, but are not following the programming course, check out the executable program "Finder". This comes complete with a very poorly drawn icon indeed.

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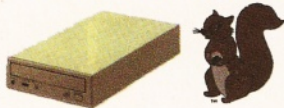
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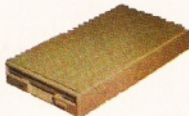


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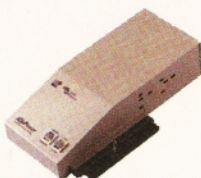
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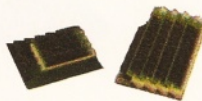
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Fidonet

Taking a much closer look at Fidonet and how to make the transition from using an off-line reader to becoming an actual Fidonet Point, **Darren Irvine** looks at setting up Pointing software on your Amiga.

One of the most commonly asked questions on Fidonet is how to go about making the transition from using an off-line reader to becoming an actual Fidonet Point. There are two main aspects of this procedure and in this month's Comms tutorial, I will carefully go through them for your benefit.

The first is simply asking the SysOp of the BBS which you have been using to set you up as a Point at their end, so that when you get your own software configured correctly everything will work as expected. Most SysOps will be only too happy to add another Point to their system, but remember not to hassle them

too much since the service they are providing in letting you Point from their BBS is a privilege, not a right.

Your SysOp will provide you with three pieces of information that you will need during your Point set-up – your own Fidonet address, the telephone number to call when you are polling for mail and your password. Note that in Fido-speak, the BBS now becomes known as your "Boss" node.

Installing the software

1. Downloading and unarchiving

Presuming you have been given the go-ahead by your SysOp, the next stage is obtaining the

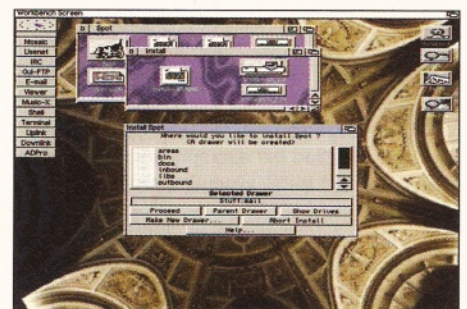


Fig. 1 – A standard Install window.

necessary software. In fact two pieces of software are needed – one to actually send and collect your Fido mail and another to handle the organisation of the different echos and other ancillary processes, such as handling signatures and origin lines.

Note that although it is indeed possible to set Pointing software up to run of a floppy-based system, it will be of more benefit to owners of Hard Drives and so I have assumed the presence of a hard disk in the following example set-ups. In general there is only one choice as far as each of these are concerned.

The first program you will need is called Trapdoor and is an extremely comprehensive piece of shareware. The second (and in some ways more important) is called Spot and both these systems should be available from almost all BBS systems that cater for Amiga files. The current incarnations of these two programs are 1.84 for Trapdoor and 1.3a for Spot – the actual filenames are...

TD_1_84.LHA

...and...

SPOT13A.LHA

...although these may vary from board to board – check your local file list or ask your SysOp for details if you have any problem finding the files.

Actually setting these two programs up is simple – if you've done it before. There are a huge amount of parameters which can be altered – most of which you don't have to alter and setting it up for the first time can seem daunting. Setting it all up the second time is a

TRAPDOOR.CFG configuration commands

Create a file TRAPDOOR.CFG in your MAIL: containing commands similar to the following – note that you should of course replace the Fidonet address, password and phone number shown with your own address and password and the number of your own Boss node.

NODE 2:443/13.17	This is your Fidonet address.
NAME "Disaster Area"	This is a name you give to your system.
SYSOP "Darren Irvine"	Your name.
PASSWORD "*****"	Your password.
BAUD 38400	The max speed your serial port can handle.
BOSS 2:443/13.0	Your Boss Fidonet address.
CALL 274919	The phone number to call.
OUTBOUND "Mail:Outbound"	The directory to find outgoing messages.
INBOUND "Mail:Inbound"	The directory in which to store incoming messages.
LOGFILE "Mail:TrapDoor.Log"	Location of the log.
MODEMINIT "~AT ~"	These are the defaults for my Sportster 14k4 modem. There is a help file with Trapdoor which will help you find the exact settings for your own modem.
MODEMHANGUP " ^"	
MODEMDIALPRE "ATDT"	
MODEMDIALPOST " "	
SERIALNAME "serial.device"	Standard serial configuration.
SERIALUNIT 0	
SERIALFLAGS 0	
SHARED	More standard modem type set-up commands.
DSR	
TWIRE	
LOGWINDOW 30/15/580/133	These commands determine the way in which Trapdoor opens up its display windows. This configuration is for fairly quiet colours in windows opened up on SPOT's own screen.
STATWINDOW 30/155/580/93	
SCREENMODE ACTIVE	
NOBACKGROUND	
AUTOOVERSCAN	
COLORS 2560/4095/10/160	
RETRIES 99	Number of times to retry a call.
REDIALDELAY 20	

lot easier, but most people luckily don't have to do this – only those like me who have had their hard disks dropped on to concrete floors by other Amiga Shopper writers (thanks John).

The next thing to do is to create a top-level drawer called MAIL and make an assignment to this directory in your s:user-startup file. Underneath this MAIL directory create three more drawers called respectively INBOUND, OUTBOUND and AREAS. Use LHA to unarchive the Trapdoor archive to MAIL: At this stage, SPOT should be unarchived to a temporary location such as RAM:

2. Running the SPOT Installer

Once you have successfully unarchived SPOT, open the drawer in which the SPOT files have been created and locate the drawer marked "Install". Next, select the appropriate Install icon, depending on which version of Workbench that you are running (either 2.0 or 2.1+).

Note that if you are running Workbench 2.1 or higher you will also be given a choice as to which language you use to install Spot. When you have selected the appropriate icon, you will see a standard Install window similar to **Fig 1** on page 81.

When you are asked for a directory in which to install Spot, select the MAIL: directory that you have just created. For the rest of the Install script, just accept the default values by clicking on "Proceed" until the installation is complete.

3. Configuring Trapdoor

Although installing Trapdoor is almost as simple

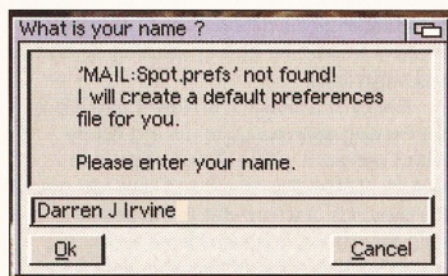


Fig. 2 – Set up some basic information.

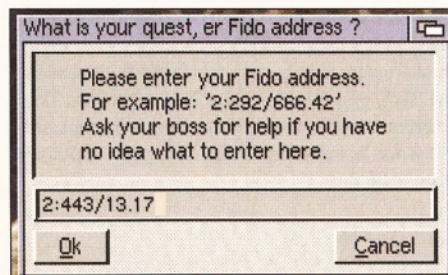


Fig. 3 – Enter the name you want Spot to use.

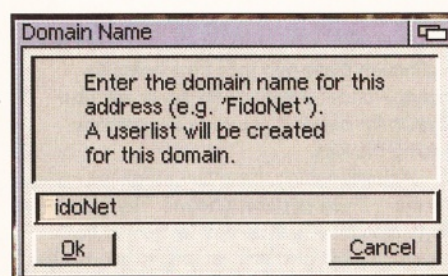


Fig. 4 – Enter your Fidonet address.

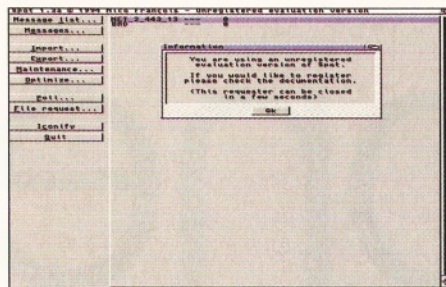


Fig. 5 – The Spot screen running on your system.

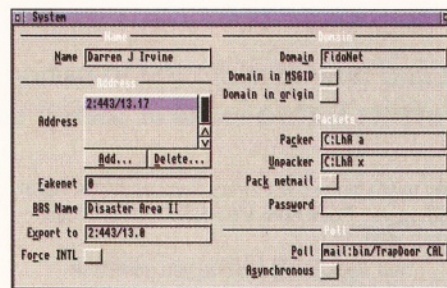


Fig. 7 – Make sure your details are set up correctly. The text in "Poll" should read like this.

as unarchiving the files to the correct place, there is one more important step and that is setting up a TRAPDOOR.CFG configuration file. Some trapdoor archives come with a series of example configuration files, but for the most part these contain many commands that you don't need and which can confuse things somewhat.

The confusion is because Trapdoor is an extremely versatile program and can be adapted to do a lot more than simply handling the outgoing calls required by Point software like Spot. However the commands you *do* need are quite straightforward and you can create a TRAPDOOR.CFG file yourself in the MAIL: drawer containing the commands shown in the boxout named TRAPDOOR.CFG configuration commands on page 81.

4. Running Spot for the first time

When you first click on the installed Spot icon (in the MAIL:SPOT drawer) you will be taken through another short installation sequence in which you will set up some basic information required by Spot – see **Fig. 2**.

In the first requester, you should enter the name which you want Spot to use when sending your mail – see **Fig. 3**.

Next, you should enter your Fidonet address which was assigned to you by your SysOp – this is the same address as was entered in the Trapdoor configuration file – see **Fig. 4**.

Next, enter the actual domain name which you will be using - this will almost always be Fidonet, unless you are using Spot solely on one of the other Fido-type networks such as Barnet.

Once you have completed this simple installation procedure, you will see the Spot screen running on your system for the first time looking similar to **Fig. 5**.

The OK requester (which you will see every time you run Spot) reminds you that you are running the evaluation copy of Spot and that you should register if you intend to keep on using Spot – details on how to register are included

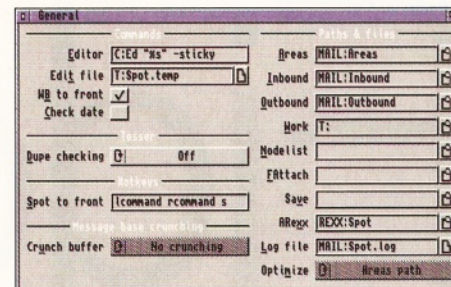


Fig. 6 – The values should be set up like this.

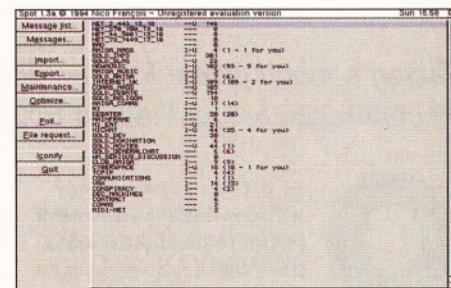


Fig. 8 – You can also change the fonts that are used by Spot. This is what mine looks like.

with the rest of the Spot files. The requester remains on screen for about 10 seconds, no matter how many times you click on "OK".

5. Configuring Spot

When you finally get the nag box to disappear, you will have to set up a few things in the various Spot configuration windows – selected from the "Settings" menu. Firstly, select "General" and make sure the values you have are set up like **Fig. 6**.

Next, select "System" from the settings menu and make sure your details are set up correctly – note that the text in the field "Poll" should read like this... (See Fig. 7.)

```
mail:bin/TrapDoor CALL BOSS.
```

You can also change the fonts that are used by Spot and finally come up with a screen that you find pleasant to the eye – the Spot system that I use myself looks like **Fig. 8**.

6. Getting started

Once you have completed the installation and configuration of Trapdoor and Spot, the next thing to do is to actually try sending a Netmail message to your Boss node. The following examples are geared towards the fact that my own Boss node uses the GECHO on his PC to handle communications with Points. If your own

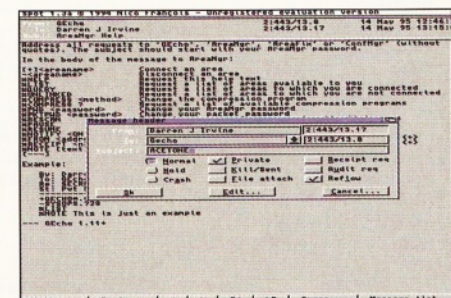


Fig. 9 – When you exit the Editor, you'll see a screen with a message header requester.

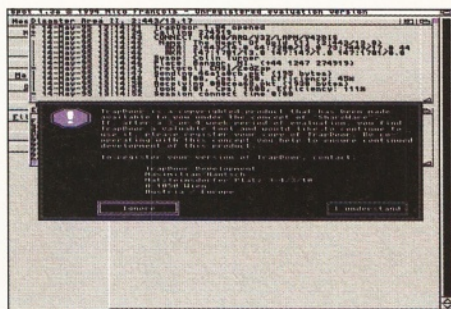


Fig. 10 – Trapdoor will also collect any mail which is waiting for you.

Boss uses a different system, you will need to slightly modify the commands shown, but in general the principle will be the same.

7. Getting your Boss node help file

The first thing you should do is send a help request message to the echo handling program running on your Boss node's system. On Spot's area screen, click on your Netmail area – this is the one that will look like...

2_443_13_17

...or similar. You will then see the message screen for this area, which will be initially blank. Click on "Messages" to pull up the similarly blank message screen. Click on the "Write" button and if all is well your default Editor will be invoked. If your Boss is using GECHO, type...

%HELP

...and exit the Editor. If GECHO isn't being used, ask your SysOp for the correct syntax to use. When you exit the Editor, you will see a screen with a message header requester like Fig. 9.

Fill in the name of the echo handler in the "To:" field – in this case GECHO and enter your Boss node's Fido address. In the "Subject:" field, enter the password which you have agreed on with your SysOp and then click on the OK button.

Now, click on "Areas" to return to Spot's main screen. To actually send the message, click on "Poll". A requester will appear offering you the chance to "Export" your messages or quit – select export. Spot will then transfer control to Trapdoor which will call the number contained in the TRAPDOOR.CFG file and send any mail which you have exported – in this case the help request.

Trapdoor will also collect any mail which is waiting for you, which in this instance will be the help file that you have requested (note that some systems require a small amount of time to prepare a help file and you may have to poll twice to actually get the file sent back to you). See Fig. 10. Since Trapdoor is also a shareware program, it pops up a nag requester after completing the call to your Boss node.

8. Reading your mail

After Trapdoor has completed the call, click on "Import" to bring the files into the appropriate areas in Spot. The main Spot Areas screen will then show any new messages that you have been sent. See Fig. 11.

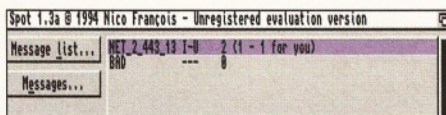


Fig. 11 – Any new messages will be shown.

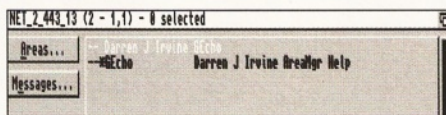


Fig. 12 – Click on Netmail again and both the message that you sent and the reply are shown.

Click on your Netmail area again and you will see that this time both the message that you sent and the reply are shown as in Fig. 12.

Clicking on any of the messages will display the text of that message, scrollable using the cursor keys. See Fig. 13. If you've got this far, you have successfully installed Spot and are ready to start using the Echomail areas of Fidonet.

Again the exact command needed to join an echo will depend on the program being used at your Boss node and the syntax of these commands will be contained in the help file which you have (hopefully) now been sent. For GECHO the general format of the command used is...

%JOIN echoname

...where "echoname" is the actual name of the area which you wish to use. After joining any given echo, actually sending mail uses the same procedure as for Netmail.

Remember though that where Netmail is a private one to one system, any message you post to an echo (no matter who you address it to) can be read by anyone else subscribing to that echo.

It probably won't take you long to see the advantages of using a system such as Spot over a conventional OLR – for a start, you actually have your own Fidonet address now. If you manage to get things working OK and have any more queries about Spot, you can Netmail me at:

2:443/13.18

Or send your E-mail to:

darsy@spuddy.mew.co.uk

Hopefully, however, you won't have to since Spot is user-friendly enough for most people to get to grips with without too many problems. ■

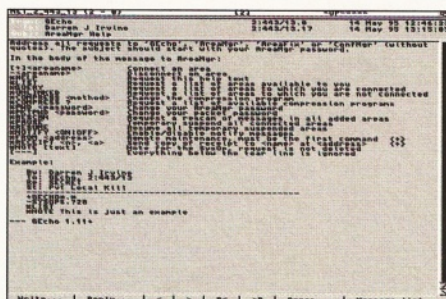


Fig. 13 – Clicking on any of the messages will display the text of that message.

"HOORAH!
AFTER 81 YEARS OUR
DREAM'S FINALLY
COME TRUE!"

"YES, WHO'D
HAVE THOUGHT
IT - A FOOTBALL
MAGAZINE ACTUALLY
WORTH
READING?"



YES, IT'S
"TOTAL
FOOTBALL"
ALIVE AND KICKING
THIS AUGUST...

Public Domain

Jason Holborn wades through another glorious mountain of quality Public Domain in search of the very best of the latest and greatest in free software.

Public Domain is a wonderful thing for people on a low budget, or for people who like to experiment with new programs without having to pay the earth for them. I must say that the quality of PD and shareware has improved vastly in the last few years and as for the quantity, I could build myself a PD swimming pool with all the disks you send me every month. But I am not really complaining – keep them coming!

Abank 1.1

17 Bit Software

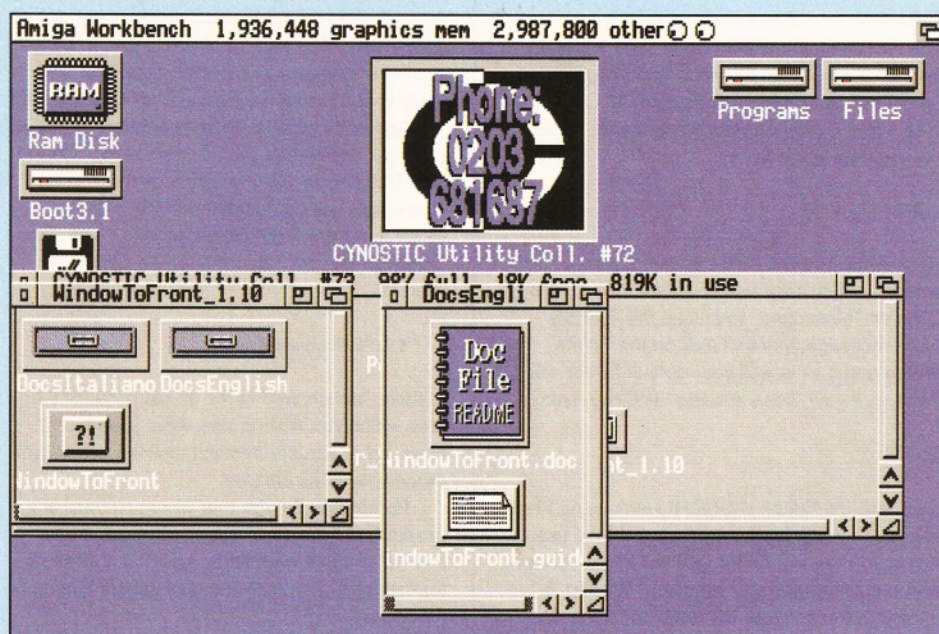
Following our review of Abank in issue 43 of Amiga Shopper, we received this update direct from the author which promises to deliver even greater control over your money.

For those of you that missed our original review, Abank is a program that lets you keep track of your finances using a format similar to a traditional bank statement. Like those depressing slips of paper that the bank regularly sends you, Abank shows a list of all your transactions displayed in date order with the amount of each transaction listed in either the debit or credit column, depending on the transaction type.

The basic idea is that, providing you keep the program informed of all your transactions, you should be able to discover the state of your finances almost instantly, without having to contact the local branch of your bank. Like all good home accounts packages, Abank can load up to 10 separate accounts simultaneously, so there's no reason why you can't work on your

Abank 1.1 © 95 David Gaussinel			
Olympic Borseille		Goal	Debit
1564600002		Balance	10000.00
Sport Account		Goal	Debit
		Balance	10000.00
01/01	Hiring field	2000.00	
01/02	February pay (encore)	2000.00	
01/03	February pay	10000.00	
01/04	Contract Prunifor 5.0	30000.00	
01/05	Match c. Olympique Castan	2000.00	
01/06	Armando - 7.0 (Paris)	10000.00	
01/07	Purchase Van Proot (referee)	10000.00	
01/08	Purchase Bolace (Goal)	8500.00	
01/09	Town hall	25000.00	
		Debit/Credit	
		15000.00	

Get your finances under complete control with David Gaussinel's brilliant Abank home accounts package.



Do you sometimes feel as if you're being watched? Look closely in the Workbench titlebar and you'll see two little eyes that watch your mouse pointer as it moves across the screen.

savings, checking and deposit accounts at the same time. If lists of numbers don't mean a lot to you, Abank will even display a variety of different graphs which show the state of your finances in a much friendlier format.

Abank may not quite be in the same league as professional home accounts systems like Digita's popular Home Accounts, but it's certainly getting there. Let's hope that the author, David Gaussinel, continues to develop his program as it's definitely one of the better PD home-accounts packages available. If you want to keep your finances in order, look no further than Abank.

Rating 88%

Utilities Collection 72

Cynostic Disk U0292

Like the man from Kellogg's, Cynostic don't make utility collections for other PD libraries. Instead, they've been churning out their own collections of fine PD utilities for more years than most of us care to mention. So much so, in fact, that they've now reached disk 72 which, like all of (er... or should that be most of?) their

previous utility collections, contains a selection of the latest PD utilities. Here's what to expect.

● **Ag2Txt 2** – The name may not be very catchy, but there's no doubt that Ag2Txt is a very useful utility. Ag2Txt is a program that converts an AmigaGuide document to highlighted text that can be read using any standard ASCII text reader. Version 2 of Ag2Txt handles the full range of AmigaGuide control codes and offers a considerable speed increase over previous releases thanks to its use of AmigaDOS 2.0's buffered I/O functions.

● **Crunched File Examiner** – File crunchers like PowerPacker are wonderful for reducing the amount of disk space that programs take up, but what do you do if you want to alter a crunched file using a file editor? Unless you have the file cruncher that was used to crunch the program, you're stuck mate!

Crunched File Examiner is a utility that examines a crunched file and tells you exactly what was used to crunch it. Although it won't de crunch the file for you, at least you know what program you need!

● **Pointer Eyes** – It may not be the most useful program lurking in the PD libraries, but

who cares – Pointer Eyes is fun! It displays a pair of 'eyes' (I kid you not!) on the Workbench screen titlebar that watch your mouse pointer as it moves around the screen. I'm reliably informed that this is amusing.

● **WindowToFront** – You don't need a PhD in biology to work out what this utility does (in fact, in this particular case, such a qualification serves no useful purpose whatsoever). For the less perceptive, however, WindowToFront allows you to bring any non-'backdrop' window to the front of the display simply by double-clicking on it. Quite why you would want a PD utility that does this when Commodore thoughtfully included one themselves with later versions of Workbench is beyond me, but there you have it.

Rating 75%

Titanic II



Paul Thompson

What have Commodore International and the Titanic got in common? Surprisingly, a great deal – both gave the impression of being as solid as a rock, but sank without trace in no time at all. Although it may well take historians some time to turn their attentions to Medhi Ali's glorious triumphs, there's no shortage of interest in that other great disaster, the sinking of the SS Titanic. If you've ever wanted to discover the truth behind the myth, Paul Thompson's new title could be for you.

Titanic II is an interactive guide which lets you explore one of the greatest maritime disasters of all time. Designed by the brains behind that other great PD history title, Tutankhamen, Titanic II offers a fascinating look at the disaster. Using a combination of text, sound, illustrations and digitised images, Titanic II covers not only the events of that fateful night, but also offers an impressive array of background information, covering such diverse subjects as the reasons why the Titanic was built, public reaction to the sinking and even the recent discovery of the wreck. All this information is logically organised and, as a direct result, very easy to access.

Once again Paul Thompson has come up with a PD title that outshines not only its PD counterparts, but most commercial offerings too. In all, Titanic II comes highly recommended. Titanic II is available for £4.99 from Paul Thompson, 7 Queens Road, Formby, Merseyside L37 2HF.

Rating 92%

AM/FM Disk Magazine

Cynostic disk AM043
If you have even the slightest interest in making music with the Amiga, then Cynostic's AM/FM disk magazine is well worth investigating. Now up to issue 19, AM/FM has always been seen as the premier disk magazine aimed at Amiga musicians and this latest issue certainly isn't going to do that reputation any harm.

Like previous issues, AM/FM is stuffed to the gills with thought-provoking editorial, news (including a rather interesting piece of Steinberg's experiments with an Amiga version of its Cubase sequencer!), reviews of

AM/FM Menu V2.02 by Teijo Kinnunen	
Quit	<ISSUE #19>
AM / FM	
AMIGA MUSICIANS FREWARE MAGAZINE	
Editorial	General AM/FM Info
Old Amiga? Please read this!	Copyright Information
Using AM/FM (Help for beginners)	AM/FM Product Catalogue
» General Articles; [part 1]	» General Articles; [part 2]
» PD (Public Domain) Reviews	» CD Reviews
» Basement Tapes + "ED" Music	» The MIDICraft Corner
» Amiga-only Music Section	» Product Info & Advertisements
» The Utilities Section	
» MIDI Music Section	
» PARENT MENU	» KITH MENU

If you thoroughly enjoy writing music on your Amiga, then Cynostic's AM/FM Disk Magazine should be at the top of your PD shopping list.

commercial and PD utilities, tutorials and a wide range of music modules which can be loaded into your favourite Sound Tracker utility. This latest issue also includes a free music utility called Module Administrator that lets you organise your Sound Tracker modules with ease.

As an added bonus, AM/FM also includes a set of drivers for the PD patch editor, PatchMeister, which allows the aforementioned utility to be used to edit sound patches for Korg's brilliant WaveStation EX and SR keyboards. If you own either of these keyboards, it's well worth buying this disk just to obtain these invaluable drivers!

Rating 82%

Pub Games Collection



Your Choice PD disk GA549

We don't normally cover PD games in Amiga Shopper, but this little collection from Your Choice PD is so good that we thought it just had to be included. As its name suggests, Pub Games contains a selection of games that you'd expect to find in any great British pub.

Games on offer include an absolutely wonderful darts game, a fruit machine game, dominoes, checkers (a draughts game) and a simple card game called CribMaster. Not all the games are to the same high standard as the darts game, but all are fun.

If you're ever in need of a light-hearted break from your word processing, programming, or 3D rendering, then you won't go far wrong with Your Choice's Pub Games collection. Highly recommended.

Rating 90%

Scribble Utilities 15

Scribble PD disk U378

Utility collections are immensely popular amongst the PD buying public as, unlike most PD disks, they contain a selection of utilities covering a wide range of different applications. Although few PD libraries would try to pretend that every program on a given disk will be of use to you, you can always guarantee that at least

one program will prove very useful indeed. Here's a rundown of what Scribble's latest utility compilation has to offer:

● **Fansi** – If you're a bit of a Comms nut, then you need an ANSI editor and this is exactly what Fansi claims to be. It can be used to create and edit images using the full IBM ANSI character set. Unlike some ANSI editors, the author has obviously tried very hard to make Fansi as easy to use as possible, which is helped considerably by its full Intuition front-end.

● **IRA** – IRA is a utility that translates any executable or binary file into Assembly source code that, in theory, can be edited and then compiled back into an executable using any standard Amiga Assembler.

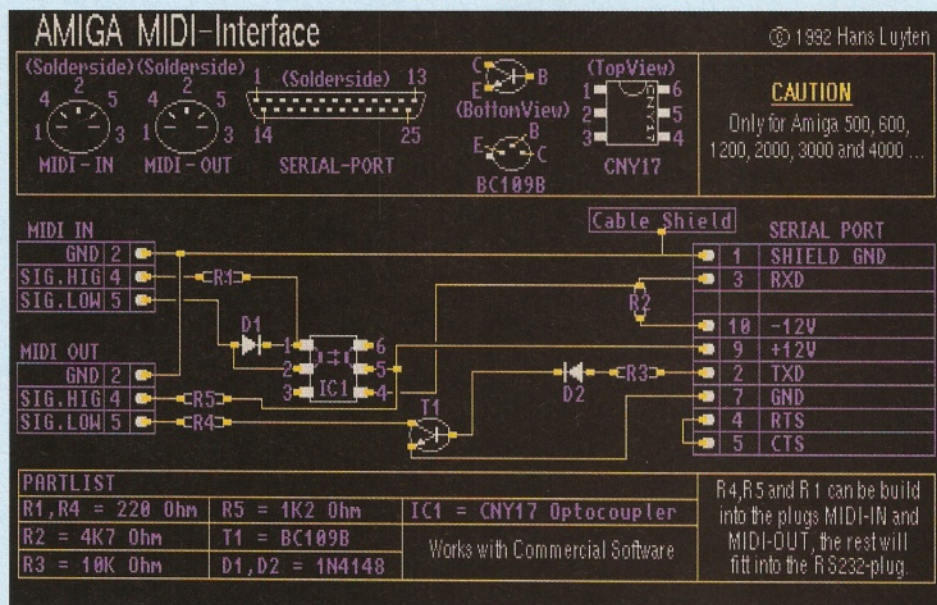
● **LHaSFX** – LHaSFX is a modified version of the popular LHA archiving utility that can create archives that are self-extracting. What this means is that anyone can decompress an SFX archive simply by 'running' it from the Shell prompt, without having to feed it through a decompression utility.

● **UnZIP** – If you've ever downloaded files from a PC-based BBS, then you'll already be all too aware that PC-users prefer their files to be stored in ZIP format. Unfortunately, Amiga ZIP utilities are a little thin on the ground, so UnZIP is something of a godsend.

● **Womble** – The most interesting of all the utilities on offer is Womble – a powerful multipurpose organiser that includes an address book, database and a timetable system. Its user

File Name: Volume 01 - Address Book - File created		Page: 1 of 8
Name	Jason Holborn	General Information:
House Title	Future Publishing Ltd	
Street	30 Portsmouth Street	
District		
Town	Q: Enter The Field Name... (display when done...)	
Country	UK/GB Number	
Country	Company	
Postal Code	BH1 2BA	
Telephone Number	01223 442244	
Fax/GB Number	01223 444099	
Comments	None of Amiga Shopper, Amiga Format and other great titles.	
Comments		
<input type="button" value="Load"/> <input type="button" value="Save"/> <input type="button" value="New"/> <input type="button" value="Edit"/> <input type="button" value="Print"/> <input type="button" value="Find"/> <input type="button" value="Sort"/> <input type="button" value="Filter"/> <input type="button" value="Merge"/> <input type="button" value="Other"/>		

Filofaxes may no longer be cool, but the computer variety still proves to be very popular. Organise your life with ease thanks to Womble.



Have you ever flicked through advertisements and wondered whether you could make your own sound sampler or MIDI Interface? With Saddle Tramp's Hardware Projects, now you can!

Interface is a little flaky to say the least, but it's reasonably powerful and very easy to use.

Rating 72%

Hardware Projects

Saddle Tramps PD disk U217

How many times have you ever flicked through advertisements and wondered whether you could make your own sound sampler or MIDI Interface, instead of having to pay the high cost of commercially available add-ons? If you have, then Saddle Tramps' latest is for you. It contains full instructions and diagrams for a variety of hardware projects which you can build yourself. Not only can you save a lot of money, but you also get the satisfaction of knowing you've built something yourself.

The disk contains no fewer than 12 separate projects, including: how to fit a PC 3 1/2 inch hard drive to an A1200; how to connect an A2000 external keyboard to an A500 or CDTV; how to make your own MIDI Interface and so on. All these projects are backed up with extensive step-by-step documentation and appropriate diagrams.

Although less experienced users may find the instructions a little hard to follow, they're clear enough for most people's needs. Unless you feel *totally* confident with a project, however, it's best not to expose your Amiga's delicate electronics to unnecessary risks.

Rating 80%

Project Apollo

Roberta Smith DTP

Thanks to multimedia authoring systems like Gold Disk's HyperBook, you don't have to be a brilliant programmer to produce your own PD multimedia reference title. Programs like HyperBook let you quickly and easily create your own interactive information systems, complete with graphics and sound, as this two-disk collection from Roberta Smith DTP proves.

Created by Andrew Hill, Project Apollo is a fascinating interactive guide to man's first

landing on the moon in 1969. Some of the language used is a little dramatic, to say the least. The history of the Apollo 11, for example, starts with this very over-the-top sentence: "It was an epic drama played out in the heavens not by gods, but by men, and for a moment – one brief, glorious moment – all the people of the world were one as they watched with bated breath and marvelled at man's ingenuity, his courage, his thrusting ambition and his monstrous arrogance". Er, right – are we still talking about the same subject?

This minor observation aside, however, it has to be said that Project Apollo is generally very good with plenty of well-researched information, some good digitised images and even a few digitised samples thrown in for good measure. Although not quite in the same league as Titanic II (reviewed earlier), Project Apollo is still worth investigating.

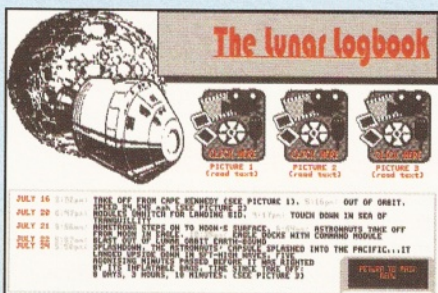
Rating 72%

Utility Collection 71

Cynostic disk U0291

Cynostic have done it again! That is, they've managed to squeeze another fine collection of PD utilities on to a single disk.

● **Butler James** – Quite why the author chose the name Butler James is beyond me, but what he lacks in taste, he more than makes up



Click on one of the three multimedia icons and Project Apollo displays a digitised image to back up the well-researched information.

for in programming talent. Butler James is simply one of the best PD address book utilities available. It includes all the usual editing, searching and printing tools, all of which are brilliantly executed and very easy to use thanks to the program's full Intuition Interface. It also runs as a Commodity so that it can be 'popped up' at any time.

● **CG Calendar** – A Compugraphic calendar? Er, not quite, but close – sure, it's a calendar but the 'CG' bit has nothing to do with outline fonts whatsoever. In reality, CG Calendar is nothing more than a simple utility that displays a calendar of the current month in a Workbench window. Simple, but useful.

● **Director** – Director is an input recorder utility that enables you to record all mouse and keyboard events that you perform as a macro. This macro can then be played back at any time and any number of times as fast as your Amiga can handle it. Director offers a certain amount of intelligence too, since it can remember which window the actions were performed in, regardless of what windows may currently be opened.

● **Injector 2** – Injector is a hotkey-invoked Commodity designed to allow you to 'inject' events into the input stream. It can be used, for example, by an ARExx script to mimic keyboard input without the user having to physically press keys. It offers a full ARExx Interface and a comprehensive Preference editor.

● **ShowFont** – You don't need a brain the size of a planet to realise what ShowFont does. As its name suggests, ShowFont displays all your available fonts using a friendly front-end. It supports bitmapped, Compugraphic fonts and even colour fonts.

Rating 77%

MUFS 1.8

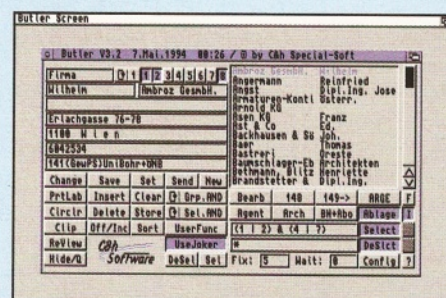


OnLine PD

It's not every day that I receive a disk which immediately grabs my attention, but with a name like MUFS, my curiosity was aroused.

Unfortunately, MUFS is actually short for Multi User File System. Ah well, it was nice whilst it lasted. What it does is to allow you to create a Unix-like, multi-user environment on your Amiga that allows several users to live together in harmony, without one worrying about the actions of the other (your kid sister accidentally deleting all your JPEG files, for example).

When your Amiga is first booted up, each user is prompted to enter their own personal



Butler James is one of the best PD address book utilities available. Keep track of friends and relatives with Butler James. You called, sir?

All the P.D's listed have received a rating above 70% or have been recommended by a leading Amiga magazine

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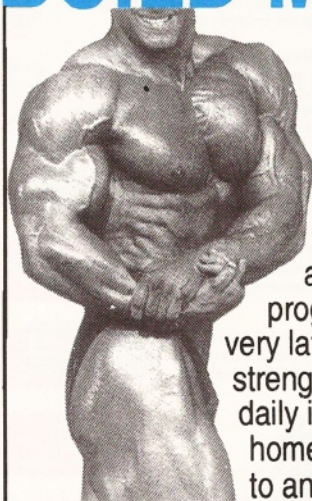
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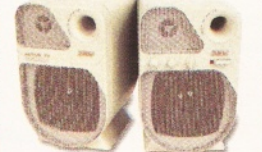
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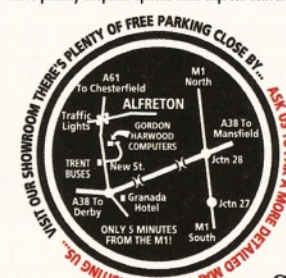
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86 user name and password. If this information is entered correctly, your Amiga then boots up. Each user is assigned their own 'system privileges' which gives them a certain amount of control over your Amiga. You could, for example, set yourself up with 'super user' status (giving yourself full control over every single file on your hard drive), but giving all other users considerably less control, therefore stopping them from accidentally erasing files, or, indeed, gaining access to 'sensitive' files which you'd rather they didn't see.

Even if you don't need to set up your computer for others, MUFS provides a very secure way of protecting your machine from prying eyes. Simply set yourself up as the only user allowed on the system and protect this status with a password and no-one will ever be able to gain unauthorised access to your files. It can be defeated by an experienced Amiga user, of course, but, then, *no* system is entirely secure.

MUFS is an extremely powerful program that is very similar to the user protection built into Microsoft's new Windows 95 Operating System for the PC. Whereas Microsoft have spent millions developing their system, however, MUFS is the product of just one very talented Amiga programmer. If you value your data, get MUFS.

Rating 90%

Pro Lottery

Ali Prior

PD author Ali Prior certainly knows how to get his PD program noticed by a magazine reviewer – because he sent two disks with nothing more than large question marks on the their labels, accompanied by a short letter printed on day-glow, fluorescent green paper. It may have been garish, but it certainly got Ali's program noticed!

When I did eventually load up his disk, I have to admit that I initially wished I hadn't – after all, programs that predict the results of the National Lottery are almost as common as football management games these days!

Being the sort of fair guy I am, however, I gave Ali the benefit of the doubt and soldiered on. And, not to put too fine a point on it, I'm certainly glad I did, because Pro Lottery is one of the best Lottery prediction programs available in the Public Domain.

Not only does it look great (Ali has obviously spent a great deal of time on the program's presentation), but its predictions seem to be based on a very solid prediction engine. Ali's so confident of his prediction system that he even sent us a demo disk that explains how the theory behind his program works.

At the offset, Ali Prior goes to great lengths to dismiss any illusions you may have that Pro Lottery will make you a millionaire. Indeed, it probably won't even help you win a *small* prize each and every week. What it *will* do, however, is to increase your chances of getting at least three, four, or even five numbers right, so that when you *do* win, you've got a better chance of scooping a good prize.

At the end of the day, however, the National Lottery is based purely on chance, so there's no way that any lottery program, no matter how

good the author claims it to be, can guarantee to help you to win money. Pro Lottery, however, adds to the fun of the Lottery and does at least give you an equal chance of being a winner.

You can obtain a free demo copy of Pro Lottery by sending an s.a.e. and a blank disk to Ali Prior, 10 Lovell Park Heights, Leeds, LS7 1DP.

Rating 82%

Utility Collection 66

Cynostic disk U0267

Feast your eyes on another bumper selection of the best (and worst) in Public Domain utilities. This disk contains everything you need to write your own AmigaGuide documents, communicate with the outside world and much more besides. Cynostic's Utility Collection 66 contains 15 separate utilities. Here's a selection of the best.

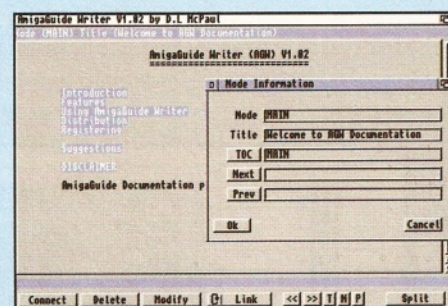
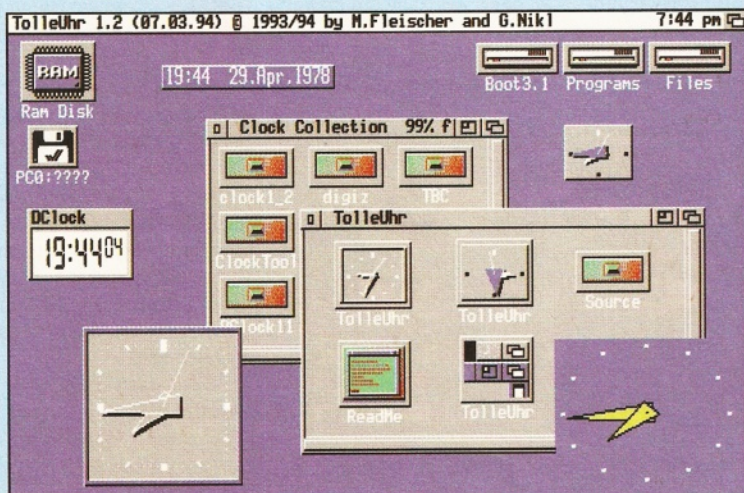
● **AGWriter** – Ever wanted to write your own AmigaGuide HyperText documents, but didn't quite fancy the thought of having to learn all those complicated control codes? If so, then AGWriter is for you. AGWriter is a text editor designed specifically to aid the writing of AmigaGuide documents. It can also be used to convert AmigaGuide documents into standard ASCII files.

● **HFT** – Described by the author as the 'coolest' ANSI terminal program available, HFT is a very small ANSI terminal that allows you to log on to bulletin boards that use the ANSI character set for their displays. Despite the author's claims, HFT certainly isn't anything particularly special since it offers only a *minimal* amount of terminal controls.

● **Undel 1.0** – Have you ever accidentally erased a file that you actually needed? If so, then you'll already know just how frustrating it can be. With Undel installed on your machine, however, all is not lost – Undel will happily undelete most files with ease.

● **PrintManager** – Print Manager is a printer 'spooler' utility. That is, a utility that acts as a 'buffer' between your printer driver and your printer which takes the output from your printer driver and feeds it to your printer only when your printer is ready to accept it. The advantage of using a spooler is that, in the event of something going wrong with your printer, you don't have to get the application which generated the printed output to print again, because the Spooler buffers it.

Need a clock for your Workbench? Take your pick – Saddle Tramps' Clocks Collection gives you the choice of nine!



Create your own HyperText AmigaGuide documents with AGWriter on Cynostic's Utility Collection 66.

● **FixAGA** – The AGA chipset may have been available for a number of years now, but that hasn't stopped some programmers from still producing games that refuse to work on the A1200 or A4000. FixAGA forces badly written games and other utilities to work under the AGA chipset.

● **Opticon** – 256 colour icons are all very well, but they do tend to slow down your Amiga's Workbench. The problem is that Commodore's own Icon Editor utility insists on writing 8-bit (256-colour) icons even if you use no more than four colours. Opticon fixes this problem by stripping bitplanes from icons so that only the required number of bitplanes are used. The author claims that it speeds up icons by a factor of two to three times.

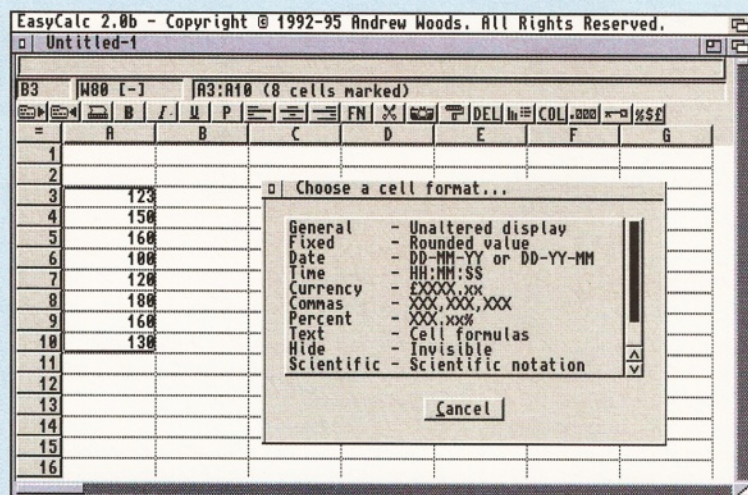
Rating 85%

Clocks Collection

Saddle Tramps PD disk U220

Now here's an interesting idea – a collection of PD clock programs. Yes folks, it's just the sort of utility collection that we've all been waiting for. But such a collection isn't as barmy as you might think. It's a well-known fact that Commodore's own Clock utility bundled with Workbench isn't quite as flexible as we might all have liked, so it should come as no surprise that there are plenty of PD alternatives. But which one suits you best? Well, what better way to find out than to buy a single disk that contains the pick of the best?

Saddle Tramps have scoured the PD libraries and this disk is the result. It contains nine different clock programs ranging from



EasyCalc is without doubt the best Amiga PD spreadsheet program ever to be released. Miss this one at your peril!

slideshow complete with fancy wipes and fades which can be used for anything from simply displaying your favourite pictures to a complete desktop video presentation.

In many ways, there's no reason why you couldn't use Belle Paint as a simple video titling package – judging by the demo 'script' bundled with the program, it's certainly more than up to the job!

As a paint program, Belle Paint is fairly impressive too. It may not pose any serious threat to commercial offerings, but as a freebie Belle Paint certainly can't be sniffed out. As you'd expect, it provides all the usual drawing and painting functions – freehand, lines, boxes, circles, curves and so on – all of which are implemented very well. Belle Paint's Scala-like front-end certainly helps to make this a very simple program to use.

Being an AMOS program, however, Belle Paint doesn't support the AGA chipset, so you're limited to how many colours your pictures can use. This minor gripe aside, Belle Paint is well worth investigating.

Rating 90%

89 Dclock (a digital clock complete with a fancy digital type face), ClockMouse (gives your mouse pointer a wrist watch), Sclock (a highly configurable digital clock that sits in its own tiny window), TBC (places a clock in the Workbench titlebar), TinyClock (a very flash analogue clock that can be displayed on the Workbench backdrop) and – best of all – TolleUhr (the best analogue clock available for the Amiga).

Rating 82%

EasyCalc 2.0



KEW=II disk A1103

The prize of "PD program of the month" has to go to KEW=II's EasyCalc 2.0. When this disk first appeared on my desk, I have to admit that I was less than enthused by the prospect of reviewing a PD spreadsheet program – having used PD spreadsheets previously, past experiences have been less than favourable.

But how wrong I was – EasyCalc 2.0 is without doubt the best PD spreadsheet program ever released for the Amiga. Okay, it may not quite match up to the likes of Gold Disk's ProCalc, or Softwood's FinalCalc, but, believe me, this program is getting frighteningly close.

Written for all Workbench 2.0-based Amigas, the first thing you notice about EasyCalc 2.0 is its very polished front-end that doesn't look too dissimilar to either of its commercial rivals. Boasting a full Workbench 2.0 compliant front-end, EasyCalc 2.0 more than lives up to its name.

It's no slouch in the raw number-crunching department either – like its commercial rivals,

EasyCalc 2.0 offers a comprehensive range of spreadsheet functions, including some quite complex mathematical operators such as hyperbolic cosine, arc tangent, averages and so on. Getting to grips with these functions is very easy too, because EasyCalc has been modelled around that grandad of computer spreadsheets, Lotus 1-2-3.

One of the most interesting aspects of EasyCalc is its impressive graphing functions which allow you to display your spreadsheet data in graph format. EasyCalc supports a wide range of different graph types, including pie charts (2D and 3D), bar (once again, available in 2D and 3D flavours), bar stacked, line and area, all of which can be saved as IFF files, or printed directly to paper.

It's not very often that you find a PD program that can truly hold its own against commercial offerings, but EasyCalc is one such program. Although its range of functions is not quite as comprehensive as those offered by either ProCalc or FinalCalc, it more than makes up for this in its ultra-friendliness and powerful graphing functions.

If you're considering a spreadsheet, take a look at EasyCalc before you spend your hard earned cash on a commercial alternative – you may find that it's all you need!

Rating 95%

Belle Paint



Saddle Tramps PD A115

Programmed in AMOS Professional by PD author Philip Drake, Belle Paint borrows more than a few tricks from a number of commercial

graphics packages, including Scala and Brilliance. Indeed, its user interface is a strange mish-mash between these two applications – like Brilliance, its various gadgets and requesters are displayed on a screen that runs horizontally along the bottom of the main screen. The overall look of the program, however, has a definite Scala influence with Scala's own font being put to good use for all the program's interface text.

Belle Paint is a paint program, but it takes even this task one step further. Unlike similar PD packages, Belle Paint also provides what the author describes as a 'video processor'. What this means is that you can build up a

Gas Trick

Roberta Smith DTP BU232

With the introduction of VAT on fuel, there's never been a more pressing time to keep a watchful eye on your gas bill. Roberta Smith DTP obviously think so too, because they've released Gas Trick, an interesting AMOS Professional program that claims to be able to calculate your gas bill for you.

All you need to do is enter the date of your last reading, today's date and the appropriate meter readings and Gas Trick will not only calculate the appropriate values, but it'll also show you how much the Chancellor has so kindly added due to VAT.

Rating 72%

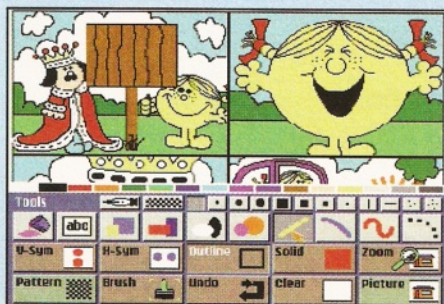
Techno BBS

Cynostic PD disk U0193

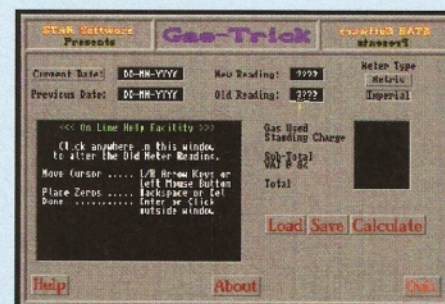
The Internet may be all the rage these days, but there's still a place for the good old bulletin boards. Before the Internet became fashionable, bulletin boards formed the foundations of the communications revolution with computer users calling boards to get the share of the latest news, E-mail and Public Domain software.

Surprisingly, setting up your own bulletin board isn't as far-fetched as you might think – all you need is a spare phone line, an Amiga

► 93



If a picture tells a thousand words then Belle Paint could earn me a fortune!



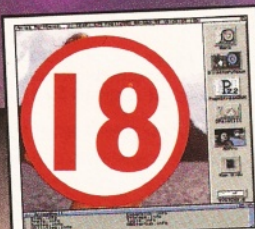
Is your house using too much gas? With Roberta Smith's Gas Trick, you can find out.

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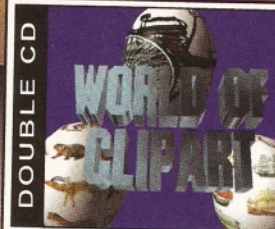
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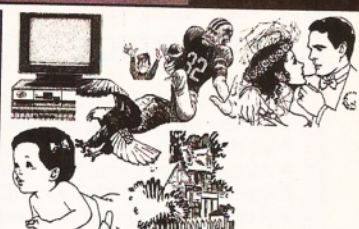


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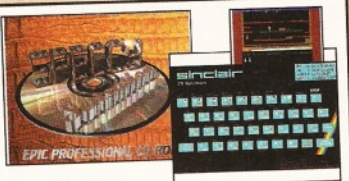
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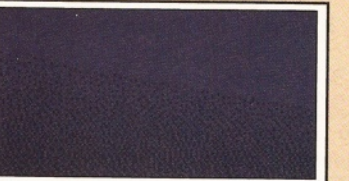
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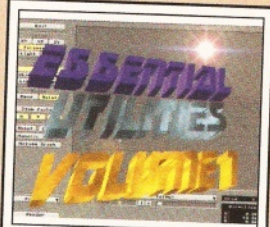
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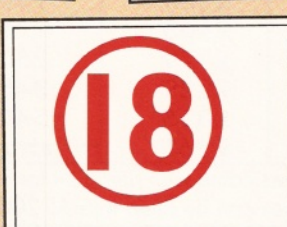
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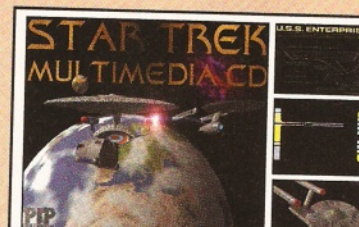
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SnooDOS 3.0 © Eddy Carroll, September 1994. Hotkey=(ctrl alt d)

Count	Process Name	Action	Target Name	Options	Res.
10	SnooDOS	ChangeDir	RS's Little Plasti:SnooDOS		
11	wbsm	MakeDir	sys:wbstartup/disabled		
12	wbsm	LockScreen	Workbench	OK	
13	dopus_task	LockScreen	Workbench	OK	
14	dopus_task	LockScreen	Workbench	OK	
15	dopus_task	LockScreen	Workbench	OK	
16	dopus_task	Open	DH2:Grabs/Grab.001	Read	OK
17	dopus_task	Open	DH2:Grabs/Grab.001	Read	OK
18	dopus_task	Open	DH2:Grabs/Grab.001	Read	OK
19	dopus_task	Open	DH2:Grabs/Grab.001	Read	OK
20	dopus_task	Open	DH2:Grabs/Grab.001	Read	OK
21	dopus_task	Delete	DH2:Grabs/Grab.000		OK
22	dopus_task	Delete	DH2:Grabs/Grab.000.info		OK
23	dopus_task	Delete	DH2:Grabs/Grab.001.info		OK
24	dopus_task	Rename	DH2:Grabs/Grab.001		
25	dopus_task	to -->	DH2:Grabs/snoopdos.iff		OK
26	dopus_task	Open	DH2:Grabs/snoopdos.iff	Read	OK
27	dopus_task	Open	DH2:Grabs/snoopdos.iff	Read	OK
28	dopus_task	Open	DH2:Grabs/snoopdos.iff	Read	OK
29	dopus_task	Open	DH2:Grabs/snoopdos.iff	Read	OK
30	dopus_task	Open	DH2:Grabs/snoopdos.iff	Read	OK
31	dopus_task	LockScreen	Workbench	OK	
32	dopus_task	LockScreen	Workbench	OK	

Status Monitoring system activity Open Log... Setup...
 Hide Quit Pause Disable Save Settings Functions...

Arguably the most useful PD utility of all time, SnooDOS is so good that it should have been a standard feature of the Amiga's Workbench!

90 ► equipped with a modem and Cynostic PD's Techno BBS.

Programmed by Ville-Pertti Keinonen, Techno BBS is a highly flexible bulletin board system for the Amiga. Provided as a shareware application, you can use it for 30 days, but the author insists that you register your copy after that time. If you decide not to register, then you'll have to make do with a bulletin board system with some major limitations – worst of which is a 'timing' feature which only accepts users logging on at specified (and seemingly random) times. I think you'll agree that registering will certainly make your BBS a bit more user-friendly!

Techno BBS consists of three separate programs – TechCon (a process control utility for the BBS which provides the SysOp with a quick and easy method of controlling the BBS' operation whilst 'on-line'); TechnoBBS (the actual BBS software – one copy of this program must be run for each 'node' that you want to run); and TechMail (the Fidonet 'tossler' utility which handles E-mail and Fidonet access). To get the BBS running on just a single line, however, you do need at least 1.5Mb of memory.

TechnoBBS offers an impressive features list, which includes: a highly configurable menu structure; Fidonet and local message bases; a built-in, full-screen message editor; file transfer support using XPR protocols; an interactive chat mode between SysOp and users; and an unlimited number of nodes – the more serial ports and modems you connect, the more nodes you can run!

Rating 82%

Little Blue Plastic Workdisk



Roberta Smith DTP

Cynostic isn't the only company that knows how to produce a decent utilities compilations as this disk from Roberta Smith DTP more than adequately proves. What's more, Roberta

Smith's choice in disk names is a lot more imaginative than Cynostic's too. Enough of the waffle, though, here's a rundown of what the disk has to offer.

● **BarClock** – Yes folks, BarClock is a clock utility that displays the time in the Workbench titlebar. A simple, yet well-implemented program that gets the job done with a minimal amount of fuss.

● **Mformat** – Mformat is designed to act as a replacement for the Commodore disk-formatting utility built into Workbench. The program allows you to not only format disks, but it can also automatically install disks and you can switch off verifying which increases the speed of formatting disks considerably.

● **Installer 1.24** – If you've bought an application within the last two years or so, then chances are that you've already used Installer.

The fact is, this Commodore-developed utility was quickly adopted by virtually all software developers as the standard method of providing Hard Disk installation facilities with their wares.

With the version of Installer on this disk, however, you too can take full advantage of this powerful program. It allows you to create a

Organise your disks and their contents with KEW=II's DiskManager 4.0.

complex, mouse-driven installation script that is very, very easy to use.

● **LastAlert 2** – How many times has your Amiga suddenly crashed for no reason whatsoever? LastAlert2 could help. Although it won't prevent crashes, LastAlert2 can inform you of the exact *reason* why your Amiga crashed. Okay, it may seem a little like shutting the stable door after the horse has bolted, but at least you know what went wrong.

● **SnooDOS 3.0** – What utility collection would be complete without a copy of Eddy Carroll's brilliant SnooDOS 3.0? For the uninitiated, SnooDOS is possibly the most useful PD program in existence. It keeps you informed of exactly what file operations and other tasks that are currently running on your Amiga are performing. This comes in particularly handy when trying to discover why an application you've installed on your Amiga no longer loads. With SnooDOS, it tells you exactly why the program failed, giving you all the information you need to fix the problem.

● **KeysPlease** – KeysPlease is a very simple Workbench utility that displays the raw key code value of any key that you press. It can also display its ASCII 7 and ASCII 8 value.

● **WBSM** – Short for WBStartup Manager, WBSM provides you with direct control over which programs in your WBStartup drawer are executed and which aren't when your Amiga boots up. Featuring a friendly Intuition front-end, WBSM is a lot easier and faster to use than manually moving the files yourself.

Rating 90%

DiskManager 4.0

KEW=II disk U1100

With a name like DiskManager 4.0, you'd think that this new program from KEW=II PD was actually yet another Directory Opus clone, but, rather surprisingly, it's nothing of the sort. In fact, DiskManager is a disk-cataloguing program which you can use to keep track of the contents of all your disks.

"So what", I hear you ask? Well, the great thing about DiskManager is that it doesn't just catalogue disks, but their contents too. What this means is that you can ask it to find a specified file and it will tell you on which disk it can be found. Good, eh? ■

Rating 85%

Workbench Screen

Monitoring Through Database

Total: 1 Current: 1 % Full: 36 DOS: 0FS
 Date: 01-05-1978 Time: 06:52:11 ID: 1A

Title: DM4.0

Filename	Size	Description
A.index	0	Error in File
amigaguide.library	62996	Executable
asl.library	10404	Executable
DM4.0	59908	Executable
dm4.dat	286	Unknown
dm4.guide	40524	AmigaGuide@ Doc
dm4.setup	112	Unknown
History.doc	2518	ASCII Text
installm	2097	ASCII Text
OrderForm.doc	1124	ASCII Text
ppmore	6424	Executable
viewguide	6752	Executable

Help All None Rename Disk Label
 Pick Disks Wildcard Strip Delete Disk Report

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AGA Exchange, 18 Brownhill, Cromer, Norwich, Norfolk, NR27 0QA. specialist areas: AGA PD/shareware full advice service, PD exchanges, Laser printing service. Catalogue free (with s.a.e. + disk). No phone orders, credit cards or direct debit.

AmiCom PD, 22 Church View Close, Havercroft, Wakefield, WF4 2PH. ☎ 0226 723807 ask for Kevin or Ian, Catalogue disk £1. Accept phone orders if buyer collects. Give special discount on large orders. Frequent special offers. Free catalogue updates.

Amiga Chum!, 12 Lancaster drive, Clayton-le-Moors, Accrington, Lancashire BB5 5RD. ☎ 0154 399229. Accept phone orders. Open any time.

Amiganuts, 3 Spring Road, Bitterne, Southampton, Hampshire, SO19 2BH. Specialist areas: Acc, Accm, Words 4, general software and titles produced by M. Meany. Catalogue, 50p + s.a.e. Do not accept phone orders, credit cards or direct debit. Open always.

Anim 1 PD, PO Box 128, West Malling, Kent, ME19 6UA. Specialise in Animation graphics. Catalogue cost 60p. No phone orders, credit cards, or direct debit.

Asgard Software, 20 Langdale Drive, Flanshaw, Wakefield, W Yorks WF2 9EW. ☎ 01924 363 059. Specialise in all types of Amiga PD (approx. 4,000 disks in library). Catalogue is £1. No phone orders, no credit cards or direct debit. Open 24 hours.

Barkin Mad, 18 Rhyber Avenue, Lanark, Lanarkshire, ML11 7AL. ☎ 01555 663530. Catalogue free when sending a s.a.e. and/or disk. Accept phone orders. Do not accept credit cards or direct debit. Open always.

Beats Brothers PD, 6 Brownings Close, Pennington, Lynton, Hampshire, SO41 8GX. Specialist areas: Amiga games and utilities. Catalogue £1 inc p&p. Do not accept phone orders, credit cards or direct debit. The catalogue disk will be released in August 1994.

Belshaw's Computers, 55 Balderton Gate, Newark, Notts. ☎ & Fax 01636 72503. Catalogue free. Accept phone orders. Do not accept credit cards or direct debit. Open 9.30am to 5.30pm. Retail outlet, customers can call at shop.

BGPD, 6 Peter Steel, Whitehaven, Cumbria, CA28 7QB. Specialist areas: can supply any title reviewed in any Amiga magazine. The latest Assassin collections. Catalogue 50p or send a blank disk. Do not accept phone orders, credit cards or direct debit. Also many second hand (commercial) games + utilities and a PD document printing service.

Blitz BASIC PD, 39 Riding Dene, Mickley, Northumberland, NE43 7DL. Catalogue is £1.50. Open 9am - 5pm. Orders processed within 48 hrs. Also produce a diskmag for Blitz users.

Chris's PD, 22 Merryfields Avenue, Hockley, Essex, SS5 5AL. ☎ 01702 203826. Chris's PD disk catalogue 60p, 2 disk Fred Fish catalogue £1.10, both Chris's PD & Fred Fish disk catalogues £1.50 or free if you send s.a.e. with sufficient disks. Make cheques and postal orders payable to C. Waite. Open 6pm-8pm weekdays, 2pm-4pm Saturdays. All disks 69p each.

CAM-PD, 26 Crowsley Way, North Arbury, Cambridge CB4 2NA.

Cathedral PD, 2 Sullivan Way, Lichfield, Staffs WS13 6AS. ☎ 01543 268564. Contact Mr. Hughes.

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Deck The Ripper of NFA PD, 173 Trevind Drive, Rushey Mead, Leicester LE4 7TR. ☎ 01162 661 610. NFA productions are setting up a network of PD houses across the UK in an effort to get PD to the public as cheaply as possible.

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Essex Computer Systems, 15 St Nicholas Road, Tillingham, Southminster, Essex, CM0 7SQ. ☎ 01621 778778. Specialise in Licenceware (central licenceware register C.L.R. organiser). Catalogue free. Phone orders accepted. Accept credit cards/direct debit. Open 10am - 6pm Mon to Fri. Members of the professional standards for software distribution.

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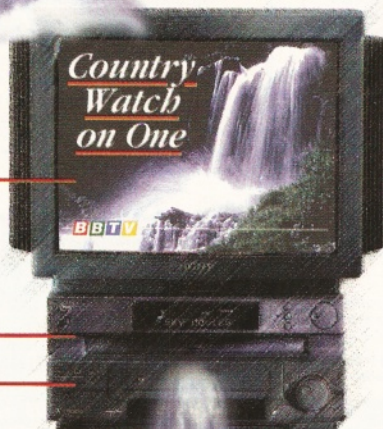
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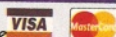
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Contact James Whitehead, 33 Middle Cliffe, Drive Crowedge, Sheffield S30 5HB.
Spalding TDM.
Contact Gedney Marsh, Spalding, Lincolnshire.
Stockfield Blitz User Group.
Contact Neil Wright, 39 Riding Dene, Mickley Square, Stockfield, Northumberland NE43 7DL.
Sunderland 94 Amiga Club
Contact Peter Hudson, 30 Rockingham Rd., Redhouse, Sunderland, Tyne & Wear SR5 5HU. ☎ 0191 549 1458.
Sunderland Blitter.
Contact Philip Kruman, 213 Fordfield Rd, Sunderland SR4 0HF.
Sutton-on-Sea Aden PD Club.
Contact Den Rounding, 8 Primrose Lane, Miami Beach, Trusthorpe Road, Sutton-On-Sea, Lincs LN12 2J2.
Tunstall Amiga Studio.
Contact Dave Rose ☎ 01782 815589.
Washington Mainly Amiga.
Contact Ray Scott ☎ 416 9189.
Whitby WAC (Whitby AMOS Club).
Contact Paul Gumsley ☎ 01947 604 840, 5 Lockton Road, Whitby, North Yorkshire YO24 3NB.

Northwest

Accrington Scotty Amiga User
Contact Scotty ☎ 01254 399 229, 12 Lancaster Drive, Clayton-Le-Moors, Accrington, Lancs. BB5 5RD.
Accrington New Hall Amiga Users Club.
Contact Bill Grundy ☎ 01254 385365.
Blackburn Blackburn Amiga Users Group.
Contact Eric Hayes ☎ 01254 675625.
Blackpool Channel Z Diskmag.
Contact Darren Busby, 3 Edleston Rd,

Blackpool FY1 3HN.

Fleetwood Fyde Computer Club.

Contact Colin Biss ☎ 01253 772502.

Liverpool Zantac design

Contact Jack Rabbit, 26 Croxteth Grove,

Toxteth, Liverpool, L8 0RX.

Lytham St Annes Amiga Users Group 2

Contact Andy Wilkinson

☎ 01253 724607.

Macclesfield Computer Club.

Contact D. Latham ☎ 01625 615 379,

Fax: 01625 429 667. Grantham House,

Macclesfield, Cheshire SK10 8NP.

Manchester V.B.S User Group.

Contact Andy Knight ☎ 0161 790 0962.

105 Whittle Street, Walkden, Worsley,

Manchester M28 3WY.

Oswaldtwistle Hyndburn Amiga

Users Club.

Contact Nigel Rigby ☎ 01254 395289.

Skelmersdale Computeque.

Contact Steve Lailey ☎ 01695 31378.

Stamford Under 18 Only.

Contact Joe Locker ☎ 01740 68388.

Wales

Bangor Amiga Maniacs.

Contact Johnny, 8 Tan-y-Grais, Caernarfon

Rd, Bangor LL57 4SD.

Cowbridge ICPUG

Contact Mike Bailey ☎ 01446 775287.

Rhyl Cwyd Shield Soft PD.

Contact 26 Doren Avenue, Rhyl, Cwyd

LL18 4LE ☎ 01745 134 3044.

Cwyd Solo (Amiga).

Contact Mike, 26 Doren Avenue, Rhyl,

Cwyd LL18 4LE ☎ 01745 343044.

Neath Amiga Navigation.

Contact Dave Thomas 4a, Allister St,

Neath, W Glamorgan.

Powys Blue Bedlam.

Contact Michael Grant ☎ 01873 811791.

Scotland

Angus Amiga CDTV Club.

Contact James Robertson ☎ 01356

623078, 22A High St, Brechin.

Bathgate Lothian Amiga Users Group.

Contact Andrew Mackie, 52 Birniehill Ave,

Bathgate, W Lothian EH48 2RR.

Cowdenbreath Amiga FX.

Contact Ryan Dow ☎ 01383 511 258.

Bo'ness C.P.C. User Group.

Contact Alistair Lyons, 18 Braehead,

Bo'ness, West Lothian, Scotland

EH51 9DN.

Dundee Tay-Soft PD Club.

Contact Dave Thornton

☎ 01382 505437.

Dunfermline Dunfermline

Sound & Vision Club.

Contact Stan Reed, 7 Maxton Place,

Rosyth, Dunfermline, Fife KY11 2DG.

East Lothian Amiga Club

(every 2nd week).

Contact Derek Scott ☎ 01620 823137,

(Sat. 1-4pm). Bridge Centre, Poldrate,

Haddington, East Lothian, Scotland.

Edinburgh Amiga Club.

Contact Jim Gifford ☎ 0131 658 1244,

30 Moredunvale View, Edinburgh

EH17 7JT.

Edinburgh Edinburgh Amiga Club.

Contact Stephen Fradley

☎ 0131 555 1142.

Edinburgh Edinburgh Amiga Group.

Contact Neil McRea, 37 Kingsknowe Road

North, Edinburgh EH14 2DE.

Glasgow Smiley's Amiga Club

Contact Paul Ibel, 26 Cormack Avenue,

Torrance, Glasgow G64 4HH.

Glasgow Amiga Helpline.

Contact Gordon Keenan, Amiga Helpline,

6 Skirsa Square, Glasgow G23.

Hawick Borders Ten Odin BBS.

Contact Derek Scott ☎ 01450 373

323/373071. 26D Harden Place, Hawick,

Borders, TD9 7BY, Scotland.

Inverness Highland PD.

Contact David Paulin ☎ 01463 242431.

Johnstone Using AMOS.

Contact Colin McAllister

☎ 01505 331342.

Perth Perth and District Amateur

Computer Soc.

Contact Alastair MacPherson,

137 Glasgow Rd, Perth.

Redburn Redburn Computer Users Group.

Contact Ruby Anderson

☎ 01294 313624.

W. Lothian Amiga Computer User Club.

Contact Alistair Lyons, 18 Braehead,

Bo'ness, W. Lothian, Scotland EH51 9DN.

N Ireland

N Ireland N. Ireland Amiga User.

Contact Stephen Hamer, 98 Crebilly Rd,

Ballymena, Co Antrim BT42 4DS.

N Ireland Digital Intensity (diskmag).

Contact Simon Denvir, 40 Old Cave Hill

Rd, Belfast BT15 5GT.

Special interests

Angus Amiga Musicians Club.

Contact Gavin Wylie, Guthrie Street,

Carnoustie, Angus.

Basingstoke AMOS Programmers

Exchange.

Contact J Lannig, 7 Majestic Rd, Hatch

Warren, Basingstoke, Hants RG22 4XD.

Braunston Fen Amiga Boatowners.

Contact D Beet Lock, Branton Fen,

Lincolnshire LN3 5UN.

Braunston Nr Daventry GFA Basic Forum.

Contact J Findlay ☎ 01788 891197.

Braunston Nr Daventry Amiga E

Support Group.

Contact John Findlay ☎ 01788 891197.

Broadstairs AMOS Programmer Club.

Contact Gareth Downes-Powell, 6 Brassey

Avenue, Broadstairs, Kent CT10 2DS.

Bury St Edmunds Amiga Sports Fans.

Contact Jamie Last, York House,

Church Road, Elmswell, Bury St Edmunds,

Suffolk IP30 9DY.

Chelmsford ICPUG

Contact David Elliott ☎ 01245 326 737.

Corringham Imagine User Group

Contact Spencer Jarvis ☎ 01375

670036. 44 Brampton Close, Corringham,

Essex SS17 7NR.

Dewsbury Ethos BBS.

Contact Steve Bell ☎ 01924 437258,

909 Leeds Rd., Chidswell, Dewsbury,

West Yorkshire.

Durham Under 18 PD User Group

(JB's PD).

Contact J Blackburn, Longridge, Potters

Bank, Durham DH1 3RR.

Glasgow 24-Bit Club.

Contact Gordon Keenan, 24-Bit Club, 6

Skirsa Square, Floor 1, Glasgow.

Haddington Heart of Lothian BBS

Contact Andrew Dowds

☎ 01620 826111/6004.

Highfields CDTV User Group.

Contact Gary Ogden, ☎ 01785 227059.

Huddersfield Third Dimension

-3D Construction Kit Users.

Contact Tony Hartley ☎ 01484 460888,

19 Kipling Close, Lookwood, Huddersfield,

West Yorkshire MD4 5HA.

Isle of White Interactive Design

Contact David Pettifer/Matt Parsons

☎ 01983 867377 after 5pm. 22 Brook

Rd, Shanklin, Isle of White PO37 7LU.

Lingfield In Touch Amiga.

Contact P. Allen, ☎ 01342 835530, PO

Box 21, Lingfield, Surrey RH7 6YJ.

London (Richmond) Micro Academy.

Contact Don Pavey ☎ 0181 878 1075.

London Walton's Mountain (BBS) Virtually

Amiga specific.

Contact Jimbob ☎ 0181 891 5730.

London ICPUG.

Contact the Membership Secretary.

Fax 0181 651 3428. ☎ 0181 651 5436.

Lothian ICPUG.

Contact David Hope ☎ 01555 811 955.

Macclesfield ICPUG.

Contact Peter Richardson ☎ 01298

23644.

Maidenhead ICPUG.

Contact Mike Hatt

☎ 01753 645 728 (8pm-10pm).

Manchester CDTV Users Club.

Contact Julian Lavanini, 113 Fouracres Rd,

Newall Green, Manchester M23 8ES.

New Whittington Digital Music Club.

Contact Roger Hunt ☎ 01246 454280.

Normanton BASIC Programmers' Group.

Contact Mark Blackall ☎ 01924 892106.

Rochford Ray Tracers.

Contact Neil Hallam, 12 Meesons Mead,

Rochford, Essex SS4 1RN.

Romford Phoenix Demo.

Contact Frank ☎ 0181 597 4661.

Rotherham Marksman (Trojan Phaser).

Contact David Green, 67 Thicket Drive,

Maltby, Rotherham, S. Yorkshire S66 7LB.

Scotland Quadrant BBS

Contact Chris Bruce (Sparky)

☎ 01289 331822.

Solent ICPUG.

Contact Anthony Dimmer

☎ 01705 254969.

Swindon Amiga Video Producers' Group.

Contact J Strutton

☎ 01793 870667 (~9pm).

Swindon MUG - MED Users Group.

Contact Richard Bannister, 6 Glevum Rd,

Stratton St Margaret, Swindon SN3 4AF.

Taunton HSPascal User Group

Contact T. Long, 13 Longmead Close,

Taunton, Somerset TA1 4SZ.

Wallington Bible Bureau.

Contact AD ☎ 0181 669 7485.

Ware Gamer-Link.

Contact Stu, 28 Churchfield, Ware,

SG12 0EP.

Witham Video Visuals.

Contact Chris Brown, 4 Lavender Close,

Witham, Essex CM8 2YG.

Workington AMOS Programmers Group.

Contact John Mullen at 62 Lonsdale St,

Workington, Cumbria CA14 2YD.

Worlingham Silver BBS

Online all cheap rates.

Contact Mat Tillet ☎ 01502 714 663,

27. Hillside Avenue, Worlingham,

Beccles NR34 7AJ.

Overseas

Australia Southern Suburbs Commodore

Users Group.

Contact Steve Perry, P. O. Box 217,

Beverly Hills 2209, Sydney,

N. S. W. Australia.

Australia Amiga Users Group of

Western Australia.

Contact Bill Sharpe-Smith, PO Box 595,

Cloverdale WA 6105, Australia.

Australia Comp-U-Pal.

Contact Comp-U-Pal, 116 Macarthur

Street, Sale, Victoria 3850, Australia.

Belgium AUGFL vzw.

Contact Lieven Lema, Meesberg 13, 3220

Holsbeek, Belgium.

Cape Town ICPUG

Contact Ken Turner ☎ +507 5131.

Internet: kturner@aztec.co.za. 24 Du

Plessis Avenue, Edgemead, 7441, Cape

Talking Shop

This month in Talking Shop: more on the Coverdisks please; Chinese whispers; in praise of genlocks; plus, competition results!

We have a varied selection of letters for you this month. There has only been a tiny amount of people telling us about projects and businesses they have set up using their Amigas. There must be more people out there using their machines to make money. Don't forget, that if we write about you in the mag, then people will know what you're up to!

Disk advice



£25 Winner

Hi! Like the new look; now how about improving the disks – see how much you can cram in?

Both disks self-booting is a waste of space and unnecessary duplication of files. One self-booting disk is adequate; any script necessary for the second disk can sit on disk one.

Make disk two a disk space disk – put the drive on one – that gives another 80K. Use LZX to pack the disks; the files are a lot smaller and it works a lot faster. (Rush out and get the May issue of Amiga User International, that will show you how to do it.) Make the price £5 and squeeze in four disks, you should be able to get

in approx 12Mb of data, PD games, PD utilities, commands, programming etc. That will put you back in pole position in the market!

**James Gilfillan
Hexham**

Well, James, thanks for your advice, but we decided that instead of rushing out and getting Amiga User International magazine, we thought it was much more useful to rush out and get their Coverdisk editor! Given that David Taylor created the way that AUI structured their disks, it seemed the sensible option.

You'll see the results on this month's two Coverdisks. And if you subscribe to Amiga Shopper, you'll have your special subscriber's-only disk to play with too. Which means that with all three disks, you'll have over 6Mb of excellent programs to play with.

(PS David says thanks very much for admiring his AUI disks.)

Satisfied customer

Thank you very much for the Digita Organiser prize that I received a few days ago – a great surprise to win anything at all, but for it to be something so handy is even better! As I recently upgraded to Wordworth 3.1 it is good to see that the Interface is common between the two, making for excellent ease of use.

As an aside, I use Word 2 on PCs rather a lot and with the advent of Wordworth 3.1. I now have an Amiga word processor that can do everything I do on Word, but with a much simpler learning curve and arguably a better user Interface. Given a better monitor than 1084ST, I imagine the display would be terrific.

On a slightly sourer note, having recently read in Amiga Format about Escom buying Commodore, I must express my concern about China being the chosen producer for new Amigas. Notwithstanding the appalling standards of human rights in this country, a much less important, but financially valid, consideration is that China has an abysmal record on copyright protection in all media fields, but particularly that of computer software – I recall reading that use of pirated software in China is above 95 per cent!

From a moral standpoint on human rights I have not bought Chinese products for a number of years and this will extend to new Amiga

products as well, more's the pity; so let's hope that Escom changes its mind since I don't expect my A1200 to last forever and I would not wish to buy a PC unless I had to.

Thanks once more for the Organiser and keep up the informative and interesting work on your magazine – one day I will learn something about the Operating System, honest.

**Mike Davenport
Taunton**

Personally, I do share your reservations about the history of Chinese human rights. Unfortunately, Amiga Shopper can't really influence Escom's choice of manufacturer.

I suggest that all readers who are concerned about the issue should join Amnesty International who campaign for the release of political prisoners. I also suggest that you write to Escom directly to express your disapproval, giving them the chance to respond.

Amiga Shopper attended a press conference given by Escom in Germany recently – to find out more about their plans for the Amiga, turn to page 14.

Cost effective?

Recently, you introduced Coverdisks to your magazine and a hefty price-increase as well. Personally, I am against this; I was looking for a 100 per cent serious magazine with a Coverdisk every now and then, or perhaps a Coverdisk for subscribers. Don't you think that by introducing two disks you're too similar to Amiga Format?

Anyway, thank you very much for creating such a great, 100 per cent serious mag. Please keep up the good work.

Greg Ross

In order to be more competitive in a very tough market, we took the decision to introduce two Coverdisks to Amiga Shopper. This has been a resounding success, because many more people are now buying the magazine. Subscribers to AS get another exclusive-to-subscribers disk too.

The main reason for the price increase is because paper prices went up by 30 per cent in February 1995 and are set to go up even further in the Autumn. They had been kept artificially low by the paper industry because of the difficulties faced by many publishers in the recession. This increase in price has affected the whole publishing industry – no doubt you have read all the recent newspaper reports on the subject.

Slugs and snails

I've just got the latest issue of AS through the snail mail. It's brilliant!! It has to be one of the best issues ever, with plenty of interesting reviews to read.

On the Cyberstorm 060 review, though, you have some screenshots of SysInfo showing various benchmarks. I think you'll find that the middle screenshot on page 34 doesn't belong to the 28MHz 040 on the Warp Engine 'cos it's clocked at 35.60MHz – which if you look at the 33MHz 040 screenshot is identical! OK, own up – who put the same screenshot in twice?

Competition results

Birthday presents!

The winners of the Happy Birthday Amiga Competition that we ran in AS50 are:
Mr. A. Dimmer from Purbrook, Hants,
Paul Davis from Telford in Shropshire,
Bernard Holt of Sutton Coldfield,
West Midlands, Ray White from
Skellow in Doncaster and John Filsak
from Bulwell, Nottingham.

Each of the winners will receive a free subscription to Amiga Shopper for a year; a copy of Datastore from Digita; a 3D Arena CD from Almathera; a copy of Acid Blitz Compiler from Guildhall Leisure; plus a copy each of Internet, Modems And The Whole Comms Thing, Ultimate AMOS and ARexx: Your Built-in Turbocharger (the last three are books from Future Publishing – see page 70 if you want to buy a copy).

Anyone would think you are disorganised university lecturers.

(On a similar note of screenshots: do we get supplied polarised '3-D' glasses for the screenshots of DOpus V5 on page 34?)

I notice Power Computing are advertising a CD-ROM which allows you to 'virtually' write to CDs? It has been advertised by another firm Schatztruhe. I'm not sure, but I didn't realise that CD-ROM (as in Read Only... not write??) drives could write to one of these writable CDs. If this is the case why bother spending about £1,600 on a CDR machine?

Jason 'Boffin' Brown
York

It's a fair cop, guv. The screenshots have been duplicated as you so rightly say. Nick has been locked in the cupboard with all the copies that haven't been sold with orders to stick the right screenshot over the wrong one on the page. (Only kidding!)

On the other hand, the Directory Opus screenshots are a little strange because the printers have been careless when fitting the plates together properly on press.

Getting disconnected

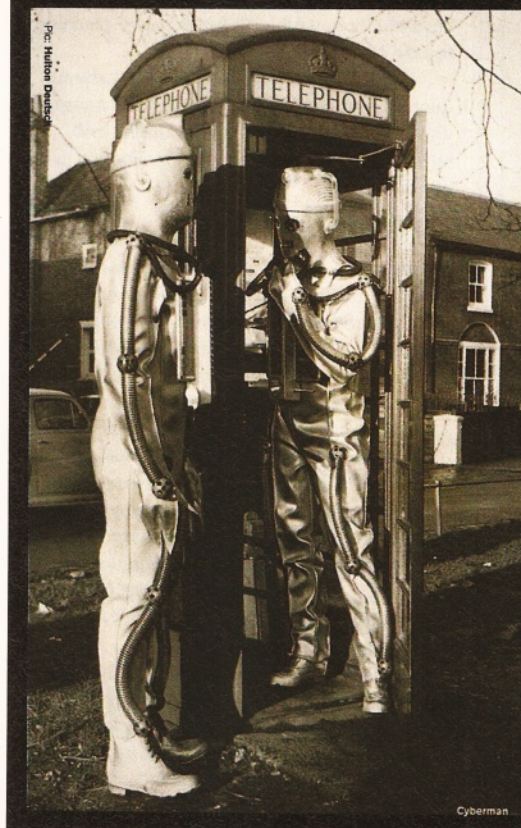
I have a problem that I'm sure lots of other people do as well. It's this Comms and Internet business, you see. The Amiga is a very popular machine, and has a range of programs available to connect the machine to the Internet. My problem is that:

- 1) There is no readable documentation about the programs.
- 2) I can't tell the difference between AmigaNOS and AmiTCP.
- 3) I don't understand UUCP, or that Dillon thing.
- 4) I have no idea how to install any of these programs to the hard drive with correct assigns and so forth so that they all work properly (UUCP is notoriously bad for this) and which programs to put where.

I have bought other magazines in the past that shout "How to connect your Amiga to the Internet", but all have been the same, saying – well, you need a modem and account, and that's it! And here's some nice pictures of AMosaic in action. Even Amiga Format did this and I would have expected so much more from them.

So, my request is this. Could Amiga Shopper, being the number one magazine for

Can you do better?



Caption competition

£25 winner!



£25 Winner

Colin Baker from Sittingbourne in Kent wrote the caption for the back cover of this month's issue (the

picture is called Human Cannonball). His £25 is in the post.

If you think you can do better, then take a look at the back cover of this issue of Amiga Shopper, then at the picture printed below, and come up with a witty Amiga Shopper- (or, indeed, Amiga-) related caption to use in the next issue?

If your wit surpasses the Amiga Shopper team's (though we doubt it, of course), then we'll send you a cheque for £25.

Send your witticism to:

Can you do better?,
Amiga Shopper, Future Publishing,
30 Monmouth Street,
Bath BA1 2BW.

the serious Amiga enthusiast, start a tutorial thingy on the Internet, covering:

- 1) What programs are available; what they do; and why we should need them?
- 2) How to get the programs?
- 3) How to get the programs installed and up and running properly?
- 4) What we can do with the programs, once they're running?

Even simple step-by-step instructions on how to set things up and running! *Anything* to save me from another RTFM message! (Er, especially if there is no FM to start with.)

Steve
Bath

We have been running a tutorial all about Comms and the Internet for several months now. See page 81 in this issue for the latest installment. You may find it useful to get hold of a copy of our March 1995 issue which has a jargon buster to explain the meaning of all the terms used on the Internet. Turn to page 104 to order back copies of AS.

I will also pass your comments on to Darren Irvine who writes our Comms tutorial every month.

A reason to return

I'm glad that the Amiga has been finally bought (well, perhaps not paid for yet, but at least there was a decision). I hope that the Amiga will get back on the streets soon. Had this happened half a year ago, I might have been using an A1200 at home now, instead of a PC. I hope Escom gets to develop new Amiga models, so I

would have a reason to return to the Amiga. It's still one of the nicest computers around.

Shopper may not be the best place to say this, but I think that the CD32 could have given a good boost to the Amiga, had it not disappeared from the market only a few months after its appearance. While it may be important to show the productivity side of the Amiga, the games side is also quite important (and a huge market) and the Amiga is losing ground to the PC in some game areas.

Eyal Teler

If you turn to page 14 and read our Special Report about Escom's plans for the Amiga, I am sure you will be encouraged to save up your hard-earned cash and get back into Amigas and CD32s for that matter.

Video view

Thanks for your excellent genlock review – I've been considering upgrading from my current Minigen for some time.

You mentioned that you wanted a 12V 1A power supply? Well, I know that Maplin do one for £9.99 – it's regulated so it should be safe for use with your genlock. (You might need to change the connector on the end though.)

You also recommended a video camera with the lens cap on for a stable sync. This seemed a strange choice – first, the Amiga's own sync is stronger than any external one I've used – I just disconnect the 'video in' on my genlock. If I want better results, I use my Commodore modulator which outputs a nice, strong composite signal.

Now, quite often I *do* connect a video

Subjects of interest



£25 Winner

The Amiga at work
We want to feature a series of articles about people actually using an Amiga for their work.

Anyone who produces music, graphics, etc. on the Amiga for commercial use, please write in to Talking Shop.

You could find yourself in the next issue of Amiga Shopper!

And remember that the star letter of the month gets £25.

Write to Talking Shop

To add your contribution to any of the debates going on on the Talking Shop pages, send your letters to:

**Talking Shop,
Amiga Shopper,
Future Publishing,
30 Monmouth Street,
Bath BA1 2BW.**

Alternatively, you can E-mail your letters to:

amshop@cix.compulink.co.uk

or:

sgrant@futurenet.co.uk

All letters received at these addresses will be considered for publication, unless you specifically advise us otherwise.

source to the genlock just for its sync – but not to gain a better signal. Instead, if I am doing a graphics-only bit on a video, then I use the sync from whatever device I am using for input because this ensures that degradation/colour loss etc. remain constant throughout the production even when I switch back to mixed video.

I have found the strongest input sync can be obtained by connecting the video in on the genlock to the output from your video recorder, and setting your video recorder to display a broadcast TV channel (BBC1 for example). This gives a remarkably strong signal for you to work over.

A camcorder is no good for two main reasons. Firstly, unless you leave it recording away, it most usually turns itself off from standby mode after five minutes – very irritating if it happens during a recording session. Secondly, if you just leave it on, neither playing back a tape, nor recording live, then, unless you have a colour viewfinder, you only get a monochrome signal and therefore monochrome Amiga graphics. I don't know if this is true for all cameras, but it's certainly the case for Sonys with monochrome viewfinders.

Finally, while we're on the subject of video, I'm always amazed at the recommendations you (amongst many others) make to newcomers to the game. I'm referring to your recommendation that you pause both decks during editing, then release both pauses simultaneously to start recording.

Now this is a very good way of making sure your selected clip starts at precisely the point you want, but as anyone who has tried to edit using cheap domestic video recorders will tell you, the transition is quite often less than perfect. I find I get the best results from my equipment by letting the playback deck run for a few seconds and settle down before I release the recording deck from record-pause.

Of course, this necessitates quick reactions and you won't get your edits spot on – but then with domestic decks you're never going to be spot on anyway and this technique tends to give better transitions. The key to it is to take plenty

of video with your camera – shoot a few seconds extra before and after each clip you want. After all, tape is cheap and it's better to have plenty to work with when you're planning to edit it later.

Does Amiga Shopper accept Workbench queries by E-mail? Only I sent one off aaaaages ago (when you first got your address) and haven't heard anything since – maybe it's just a big backlog?

Ian Micallef

I'm afraid you're wrong about the best source for sync. Outside of a TBC, a video camera with the lens cap on provides the most stable source of sync available from the consumer sector. Using a video recorder certainly provides a strong video source, but not for sync. The change from light to dark on a TV channel can cause considerable timebase errors and, if this is crucial, you'll lose out. As for the camera going into standby mode, this only happens when you're using battery power, not for the mains. How else would Dixons get away with their camcorders pointing at the High-Street if they were going into standby mode every five minutes?

Steve McGill

As for your Amiga Answers – not Workbench, that's Amiga Format, which may be why your questions have gone astray – we try to answer

as many of your queries as possible, but as you so rightly say, we do get hundreds in every month and can't possibly answer them all.

Power supply

While reviewing the Rocgen Plus you sought information on the availability of a 12-volt 1-amp supply. The said item can be purchased from any branch of Maplin Electronics (along the A4 to Bristol, 302 Gloucester Road, across from the Esso garage), priced at a reasonable £9.99. Convenient for yourselves, but for the rest of us Maplin offer a comprehensive mail-order service with a 800+ page catalogue for only £3.45 – well worth a look!

Maplin Electronics, PO Box 3, Rayleigh, Essex SS6 2BR.

Thanks for the Supertest, I've decided which genlock to go for, hope the above is of some use to you.

**G McWilliam
Aberdeen**

In answer to the LocGen Plus request for a 12V 1-amp supply (issue 50, page 27).

Vivanco, Universal Supply Unit – £19.99.

3-12v switchable, stabilised power supply – output 100 miliwatt. Complies with BS.

☎ 01442 231616. Order No.4008928031111.

Anon ■

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AMIGA FORMAT PRESENTS

Instant relief!

Next month all your questions will be answered. We get hundreds of letters to Workbench every month, so we'll be addressing some of the more persistent problems in excruciating detail. So, if you're having a problem with your printer, modem, monitor or

even commercial software, you're almost bound to find an answer in our troubleshooting guide. Even if fortune has smiled on you and you have no problems, you're certain to find some useful Amiga advice in our bumper section of tips and tutorials.

Escom speak

Plus, we bring you the latest news from Escom and their plans for the Amiga. Don't miss it.

Issue 74

On sale Thursday, July 6

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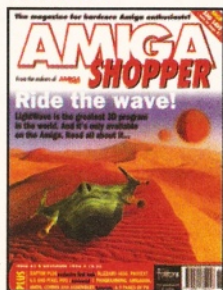
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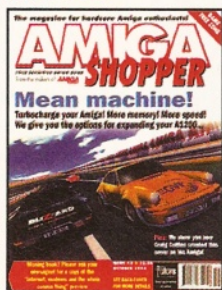
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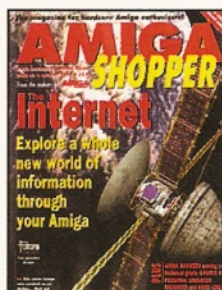
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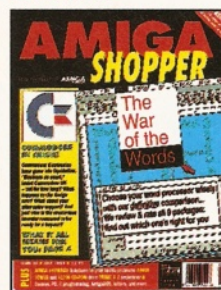
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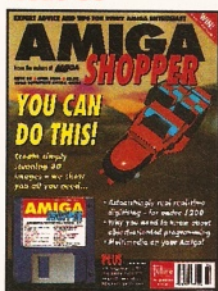
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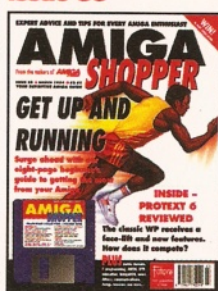
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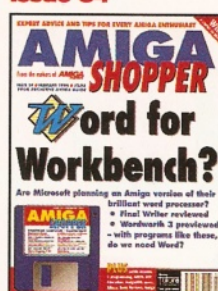
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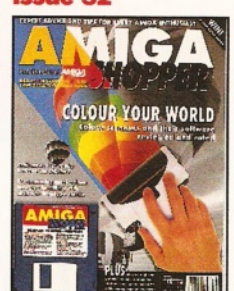
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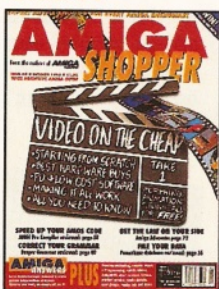
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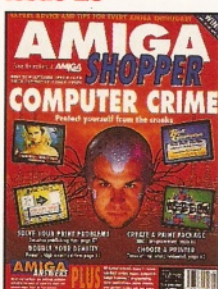
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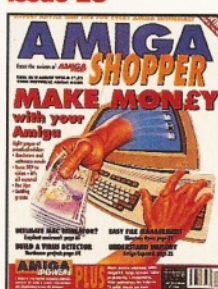
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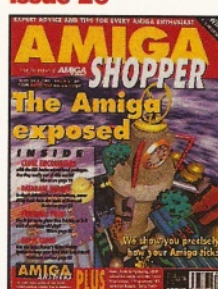
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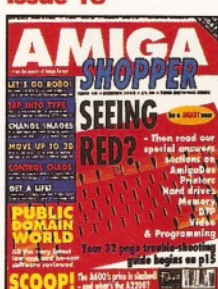
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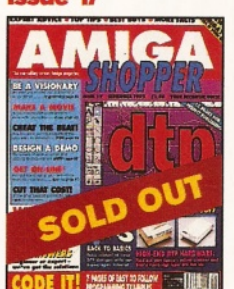
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Plus!

- The first part of our stunning Protext giveaway, with the full program next month and the dictionary on our October disk. As well as tonnes more utilities on the second disk
- Pages and pages of reviews of all the latest Amiga software and hardware
- The latest Public Domain programs reviewed and rated
- All your Amiga-related problems solved in Amiga Answers

Supertest

Fancy yourself as a bit of a Picasso? Or maybe a Rembrandt? Then you can't afford to miss our Supertest next month. **Peter Lee** test the best paint and image processing packages around.



Competition

We reviewed the HiQ PowerStation on page 47 of our July issue and gave it 90 per cent and a Star buy award. Next month you will be in with a chance to win your very own PowerStation.



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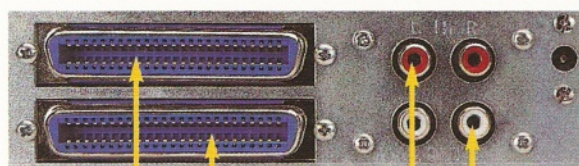
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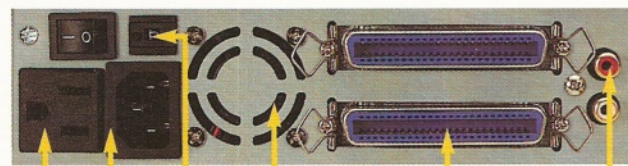
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